

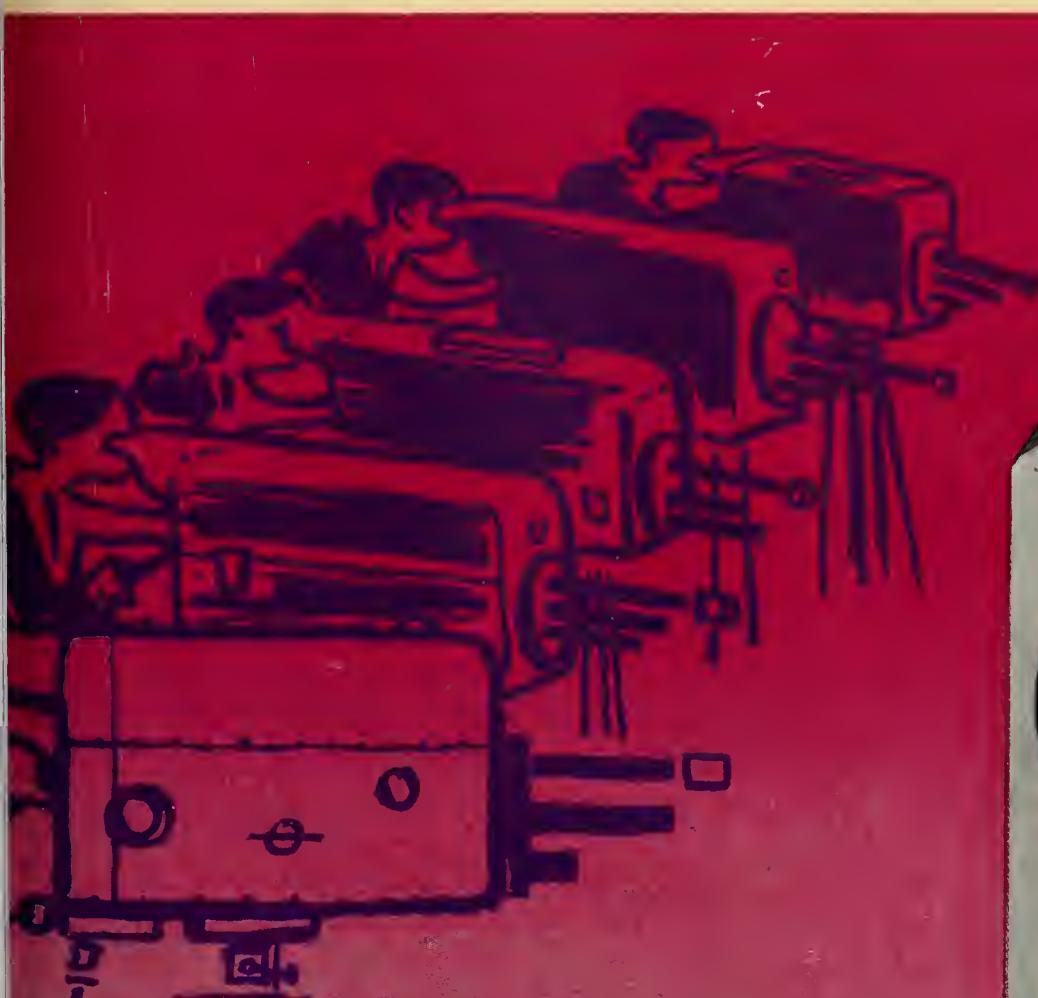
The



CHEMIST AND DRUGGIST

For Retailer, Wholesaler and Manufacturer

OCTOBER 11 1958



All I.T.V. Stations

Massive Press and T.V. advertising
will create yet another record demand
for Famel this season

...DISPLAY and sell more than ever before!



KELDON LTD · PERIVALE
MIDDLESEX

FINE CHEMICALS

and pharmaceuticals

Specification sheets for each of the products listed are available on request.

ALOIN
CAMPHOR MONOBROMIDE
CHLORAL HYDRATE
CHLOROFORM
CHRYSAROBIN
ERGOT PREPARED
ETHER ANÆSTHETIC
ETHER SOLVENT
DRY EXTRACT OF CASCARA SAGRADA
EXTRACT OF MALE FERN
FERRIC AMMONIUM CITRATE
FERRIC QUININE CITRATE
SACCHARATED FERROUS CARBONATE
SACCHARATED FERROUS PHOSPHATE
JALAP RESIN
JALAP PREPARED
JALAPIN
MAGNESIUM TRISILICATE
OLEORESIN OF CAPSICUM
OLEORESIN OF GINGER
PODOPHYLLUM RESIN
POTASSIUM CITRATE
SALIGENIN
SCAMMONY RESIN
SODIUM CITRATE
SODIUM TAUROGLYCOCHOLATE

T. & H. SMITH LTD

Dry
well
be
po

Description
Solution

Loss on Drying

Water Soluble
Extractive

Bulk Densit

Packing Densit

M

St

Action and



Placing a big order?



Make sure it's advertised in the Daily Mail

A big order can involve you in a big risk — unless the goods are properly advertised. So you'd better ask this beforehand: "*Is the Daily Mail on the advertising schedule?*"

It's important. If the answer's Yes, you can stock up a new line quite happily. Because your best customers, the steady, dependable ones, your bread and butter trade, tend to be Daily Mail readers. You may have noticed it yourself.

If they see anything advertised in the Daily Mail, they know they can trust it. The Daily Mail vets its advertisements very carefully. And if a genuine complaint comes in about anything it advertises, the Daily Mail will *get the customer's money back*. Or make the refund itself. That sort of thing has built up a lot of confidence over the years.

So do make sure your lines are advertised in the Daily Mail.

YOUR BEST CUSTOMERS READ THE DAILY MAIL

*This is the present your
customers will look for!*



**SPECIALLY WRAPPED
IN A GAY GIFT PACK**

**SPECIALLY BACKED
BY BIG NATIONAL
TV AND PRESS
ADVERTISING**

BRYLCREEM HOME DISPENSER

The smart new Gift Pack gives the Brylcreem Home Dispenser extra eye-appeal, extra display value. It will be backed by advertising on a grand scale—all TV networks, National press and National magazines. Millions will see this powerful publicity. Cash in on the hundreds of thousands of packs that will be sold. See that you stock, show that you stock, the Brylcreem Home Dispenser in the new Gift Pack.

PRICE RETAIL 8/6 Make over 2/- profit on every Dispenser you sell
COUNTY LABORATORIES LTD., Honeypot Lane, Stanmore, Middlesex. WORDSWORTH 4321

RHODORSIL SILICONES

**FLUIDS
EMULSIONS
WATER REPELLENTS
RESINS
ANTI-ADHESIVES
LUBRICANTS
ANTI-FOAMS**

THEY HAVE NO EQUAL

*Immediate delivery from U.K. Stocks
at competitive prices.*

Manufactured by:

Societe des Usines Chimiques Rhone-Poulenc, Paris

Apply for samples and literature from U.K. Distributors:

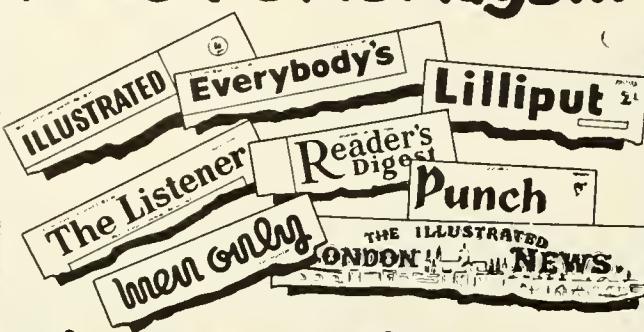
R. W. GREEFF & CO. LTD.

Garrard House, 31/45 Gresham Street, London, E.C.2

Manchester

Birmingham

These are the mags...*



that carry the ads...



REPRODUCTION OF
THE FULL PAGE
ADVERTISEMENT

that sell the jugs...



**that will make so much
profit for YOU
this Christmas!**

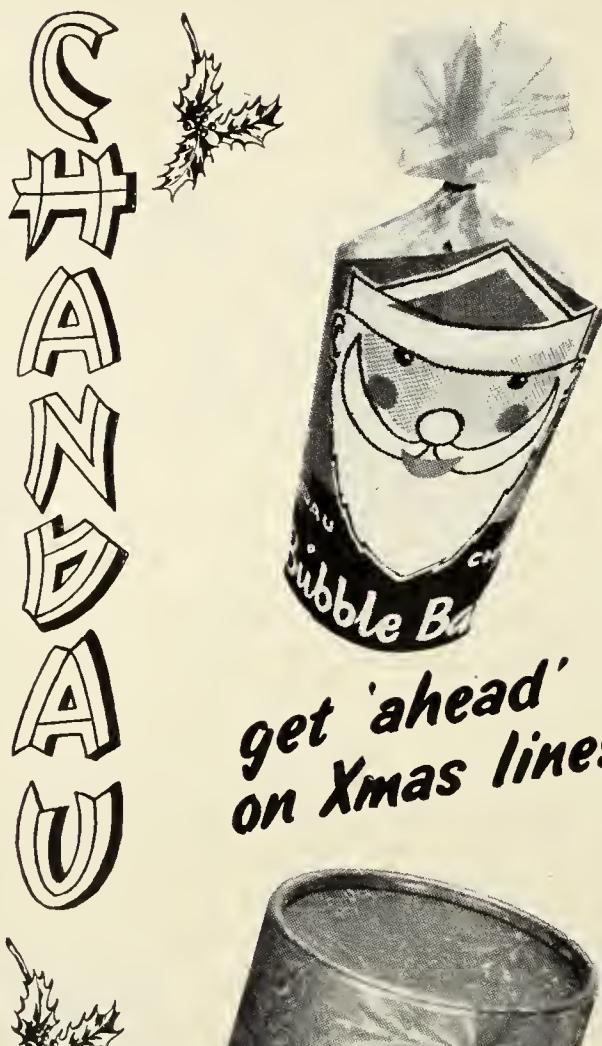
THERMOS

REGISTERED TRADE MARK

the reliable brand of vacuum vessels

JUGS · FLASKS · JARS · BOWLS

* over 10,000,000 gift-hunting male readers
alone! Stock up now — and be ready
Your wholesaler can supply for the rush!



*get 'ahead'
on Xmas lines*



Order these

BUBBLE BATH

packs — NOW !

POWDER BUBBLE BATH :

Sleeved container (illustrated, top)

13/4 Dozen, plus 30% P.T. 2/- each Retail

Drums

25/- Dozen, plus 30% P.T. 3/9 each Retail

VARIETIES : Woodland Fern, Scottish Heather, Wild Violets

LIQUID BUBBLE BATH: In boxes of 6 assorted (Not illustrated)

27/- Dozen boxes, plus 30% P.T. 4/- per box, Retail

All these lines show the usual Chandau generous profit margin. No extra charge for Xmas packs.

T. L. BENTON & CO. LTD.
186 SEVEN SISTERS ROAD, LONDON, N.7 Tel : Archway 2674

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a "Standard"

**"THE
SURE
SHIELD"
SERIES**

of "Quality"

Also in
1/-
Heat-
sealed,
moisture-
proof
Cartons.

Tax free →

← 1/- Bags — Attractive Show outer

Enquire for Price List and direct buying terms to:

THOS. GUEST & Co., Ltd., Carruthers St., Manchester 4

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Bronnley

A Seasonal reminder to all BRONNLEY AGENTS

Our attractive and Colourful Coffrets are in heavy demand this year, and will be much sought after as Christmas Presents. In a variety of sizes and designs—just right to enhance your Christmas displays. If you have not yet let us know your requirements, we suggest you do so without delay.

BRONNLEY · LONDON · W.3

For happier, healthier motherhood

One factor which has contributed to the encouraging decrease of infant and maternal mortality in civilised countries is the development of modern nutritional knowledge. A preparation which is contributing to healthier and safer motherhood in this country is PREGNAVITE. This comprehensive vitamin-mineral supplement is specifically formulated to fulfil the increased daily requirements of the pregnant or lactating woman.

Packs of 60, 120 and 1,000.

FORMULA 2 tablets, one of each colour three times a day provide:

liquid vitamin A conc., B.P. (40 mg.)	2,000 i.u.
liquid vitamin D conc., B.P. (30 mg.)	300 i.u.
vitamin B ₁ , B.P.	0.6 mg.
vitamin C, B.P.	20 mg.
tocoph. acet., B.P.C. (vitamin E)	1 mg.
nicotinamide, B.P.	25 mg.
ferr. sulph. exsic., B.P.	204 mg.
calcium and phosphorus equivalent to 480 mg. calc. phosph., B.P.	
pot. iod., B.P.	not less than 15 p.p.m.
cupr. sulph., B.P.	not less than 40 p.p.m.
mang. sulph., B.P.C.	

PREGNAVITE PRICES

PACK	Retail	Chemists
60	4/1	33/4 per doz.
120	7/4	59/10 "
1,000	48/-	32/9 each

VITAVEL SYRUP for children

The delicious flavour of Vitavel Syrup solves the problem of ensuring continuity of treatment where supplementation is indicated.

Pack	Retail	Chemists
6 fl. ozs.	3/9	30/- per doz.
40 fl. ozs.	24/-	16/- each

BEMAX for all ages

Bemax is stabilized wheat germ — the richest natural vitamin-protein-mineral supplement.





THE WORLD-WIDE SERVICE

From Formula
to Consumer
Package

[ARTHUR H. COX & CO. LTD., BRIGHTON, ENGLAND

GON

*IS GOING TO SELL THIS WINTER
FOR TWO GOOD REASONS —*

I. ADVERTISING

GON will be advertised right through the winter in no fewer than 10 National Women's Magazines and on TV in every area! This advertising will be seen by an estimated 20 million chilblain sufferers in Britain—not once, but again and again right through the winter. This is the biggest single campaign ever launched by any manufacturer for a chilblain product. Stock up now and take advantage of the bonus offer for even bigger profits.

WARD, BLENKINSOP & CO. LTD., YORK HOUSE, 37 QUEEN SQUARE, W.C.1
Telephone : HOLborn 5992/6 (5 lines)

2. PRODUCT

GON is a chilblain treatment and preventative in tablet form—each tablet containing 10 mgm acetomenaphthone and 50 mgm nicotinamide. The tablets are packed in display outer boxes of 24 tablets, and retail at 3/- a box. Attractive window display cards and counter dispensers are available. Generous bonus offer terms are available for a minimum of 2 display boxes. For orders of 3 display boxes and over, the profit margin for GON leaps to nearly 50%. Order yours NOW!

Telegrams : Duochem, Westcent, London

*Order NOW for big profits this winter
and take advantage of the BONUS OFFER
This offer terminates 1st. NOV.*



This is the powerful GON advertisement that the millions will see time and time again in no fewer than ten national women's magazines.

THE COMPLETE LAUNDRY SERVICE IN A TUBE...

The new need... DYLON

DRIP-DRY

-wash

DYLON DRIP-DRY WASH is not just a new product—it is a new need! Millions who travel, and as many more at home, need this quick convenient tube detergent. It is a boon for washing all garments, lingerie, shirts, stockings—and it is an almost universal cleaner as well. Just put one display carton of six tubes on display—and watch results.

A black and white illustration of a woman with short hair, smiling, as she washes laundry in a large tub. Bubbles are rising from the water. To the right, a large tube of Dylon Drip-Dry Wash is shown being tilted, with bubbles coming out of the nozzle. The tube has a red label with the product name and a smaller label below it that reads "Ideal when travelling for washing lingerie, shirts and stockings". Above the tube, the text "THE COMPLETE LAUNDRY SERVICE IN A TUBE" is visible. To the right of the tube, a circular price tag shows "2'6". Below the tube, the text "Each tube individually boxed with leaflet instructions. Contents 2 3/4 oz. nett. To retail at" is followed by "25% NETT PROFIT". Further down, it says "Supplied in ½ dozen cartons for counter display." On the far right, there is a display carton containing several tubes of the detergent.

Washes all fabrics to perfection, including Nylon, 'Perlon', 'Terylene', Rayon, Orlon, Wool, Silk and Cotton. Also invaluable for cleaning clothes, hats, leatherware, glass and perspex, cars, caravans, and camping gear.

MAYBORN PRODUCTS LTD.,
DYLON WORKS, SYDENHAM, LONDON, S.E.26

Trade Marks Registered

Get this on your counter now*

exploit the peak season for 'Benzedrex' Inhaler fully this year



This brand new counter display unit comes with your next order of a dozen. Order yours at once.

and sell more 'Benzedrex' Inhalers than ever before!

*Why not put one in your window too?

It's arresting — uses minimum space — and tested . . . we know it sells!

'Benzedrex' Inhaler — buy them by the dozen — sell them by the dozen
Profit: 11½d. each and the extra free Inhaler in every dozen

Retail price: 2/6 each



Smith Kline & French Laboratories Ltd Coldharbour Lane, London SES

'Benzedrex' is a trade mark

BX:TA7B (Col)

I'm all right—

HACKS!

Their catchy ads are catching
customers in droves !

And I'm making 11d a pound—

3/8d a 4lb jar, 4/7d a 5lb tin !

I'm more than all right—

I'm great—HACKS !

ORDER HACKS FROM YOUR USUAL SUPPLIER NOW !



**She is
one of 12 million women...
and she's
one of your customers!**

She is one of 12,000,000 beauty-conscious women reached by COLOR-GLO's powerful and sustained advertising. She would like to have the prettier coloured hair that COLOR-GLO promises—and gives. Simple, fool-proof, harmless, semi-permanent, and natural in appearance, COLOR-GLO is just what she and millions of others want. That's why COLOR-GLO is big business. Stock it, display it, and see how it sells.

STOCK

COLOR-GLO in the full range of colours:
DEEP AUBURN · AUBURN
HONEY BROWN · GOLDEN CHESTNUT
DOVE GREY · MOLTEN GOLD

DISPLAY

the attractive,
attention-getting COLOR-GLO
packs, and Showcard

and SELL

in the big new market
of semi-permanent
hair colouring

Retail price 4/- per bottle. Trade price 22/9 per dozen plus 60% tax.

Color-Glo
SEMI-PERMANENT HAIR COLOURING

The effects last through 6 to 8 shampoos

GOLDEN LIMITED 7 GROSVENOR STREET, W.I. Telephone: Hyde Park 1671/6

Republic of Ireland enquiries to: Lilmar Pharmaceuticals Limited, Santry, Dublin · A creation of L'OREAL · PARIS



Announcing...



'Triominic'

WANDER

**the NEW CONCEPT for
relief of the common cold orally**

THIS effective treatment for the relief of common cold symptoms will be in constant demand—on script only (Schedule 4)—from now onwards for these reasons:—

'TRIOMINIC' is therapeutically sound: it comprises effective decongestant and anti-allergic drugs.

'TRIOMINIC' taken by mouth thrice daily in "timed-release" tablet form provides around-the-clock relief from running nose and postnasal drip.

'TRIOMINIC' has already evoked an exceptional success in the U.S.A. for the Associate Companies of A. Wander Ltd.

Formula per "timed-release" tablet:

Phenylpropanolamine-HCl	50 mg.
Mepyramine maleate B.P.	25 mg.
Pheniramine maleate	25 mg.
S.4	

Packs: Dispensing bottles of 50 and 250 tablets.

Price per dozen including Purchase Tax: 50's 132/2d.; 250's 567/8d.

Also available: 'Triominic' Syrup, for children and those adults who prefer a liquid medication, in bottles of 2 fl. oz. and 20 fl. oz. (dispensing). Price per dozen including Purchase Tax: 2 fl. oz. 39/-; 20 fl. oz. 221/-.

'TRIOMINIC' will be advertised throughout the common cold "season" in the usual medical journals. In support of this advertising, nation-wide visits by medical representatives, follow-up mailings and generous sampling have begun.

TO MEET THE ANTICIPATED DEMANDS, BE SURE TO ORDER YOUR FIRST STOCK NOW!

Literature on request from the Medical Department

A. WANDER LIMITED, 42 UPPER GROSVENOR STREET, LONDON W.1.

T 63

C



Inecto are launching a lively new advertising campaign to stimulate the demand for 'Hair Magic'. Young women will want the fashion colours. Older women can cover up to 50% of grey with the Progressive Browns, to put the clock back five - ten - fifteen years

DO BETTER BUSINESS

with MAGIC ★ ★ ★

Hair Magic!

THE GLAMOROUS SEMI-PERMANENT
COLORING THAT SHAMPOOS COLOR INTO THE HAIR

NOW—the first campaign goes into action
in the mass-readership newspapers



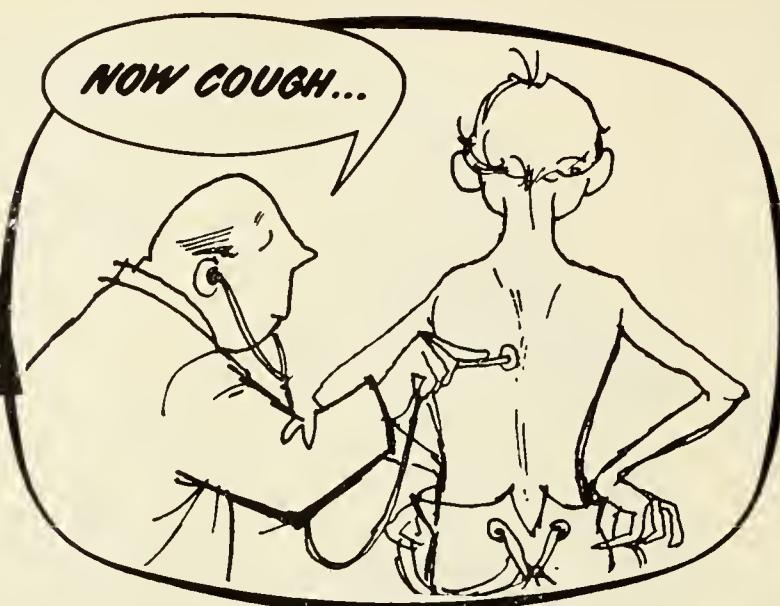
WITH BIG, BRIGHT NEW ADVERTISEMENTS TO START THE BOOM

IN JANUARY a bigger campaign will follow up with
half-pages in full colour in such weekly magazines as
“Woman” and “Woman’s Own”, and with further insertions in the glossies.

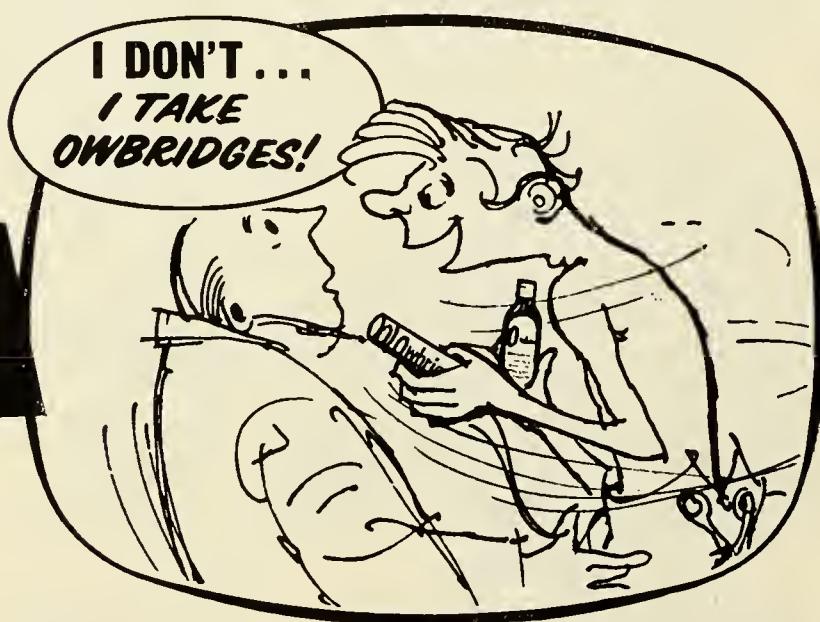
- Make sure you know about Hair Magic! How simple and easy it is to apply at home be able to advise your customers about the shades.
Ask for full details, leaflets, display material.

with Hair Magic BY INECTO

These men



will be seen



ON TV SCREENS 48,272,500 TIMES AND IN 115,601,869 NEWSPAPERS
THEY WILL FEATURE IN THE

biggest ever advertising campaign for

Owbridge's

LUNG TONIC AND PASTILLES

BE READY! STOCK UP NOW! STOCK AND SELL!

W. T. OWBRIDGE LIMITED · OSBORNE STREET · HULL

PRODUCTION DIVISION MEMO

No.84

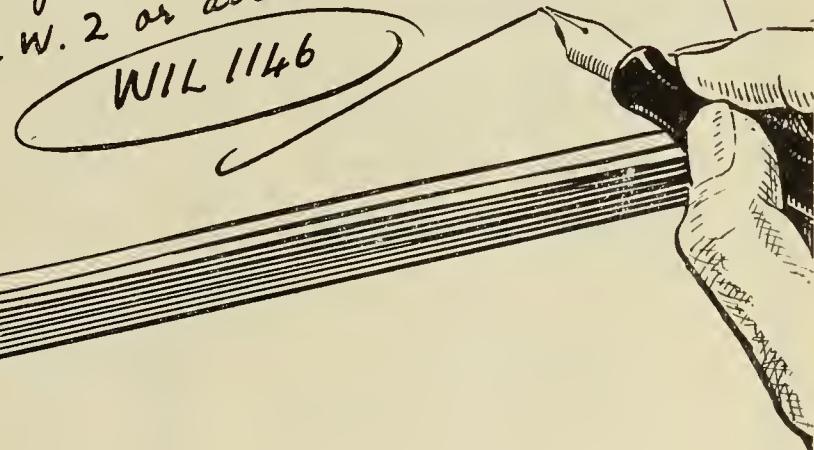
From Production Director To Production Manager

I now learn that Kirby of London have additional facilities available to the manufacturing, wholesale and Proprietary trades for the production of tablets.

They have increased floor space accommodating new equipment to cope especially with this type of work — it goes without saying their price will be alright, whether we supply our own raw materials or not, and we know their quality is first class.

I suggest therefore you contact them without delay at Willesden Green London N.W. 2 or alternatively ring

WIL 1146



IMAGINATION

AT WORK ON YOUR
COUNTER

THE PACKS

to win new customers each day

THE QUALITY

to maintain repeat sales



Hand Cream

The flexible polythene "Hand" in pastel pink, blue, green to attract your customers, containing Hand Cream which they will quickly find superb in restoring chapped hands to delicate smoothness.

Retail price 5/6 each.

Prices to retailers £1-9-2 per doz. box + 17/6 P.T.

**ORDER NOW
FROM YOUR
WHOLESALE**

LINCOLN

HAIR PRODUCTS LTD.

55/57 STRAFFORD RD., LONDON, W.3
Tel.: ACOrn 6791 (3 lines)

Linc-o-Lin

BEER

Shampoo

The original high beer content shampoo really does give "body" to the hair.

**BABY
BARREL**

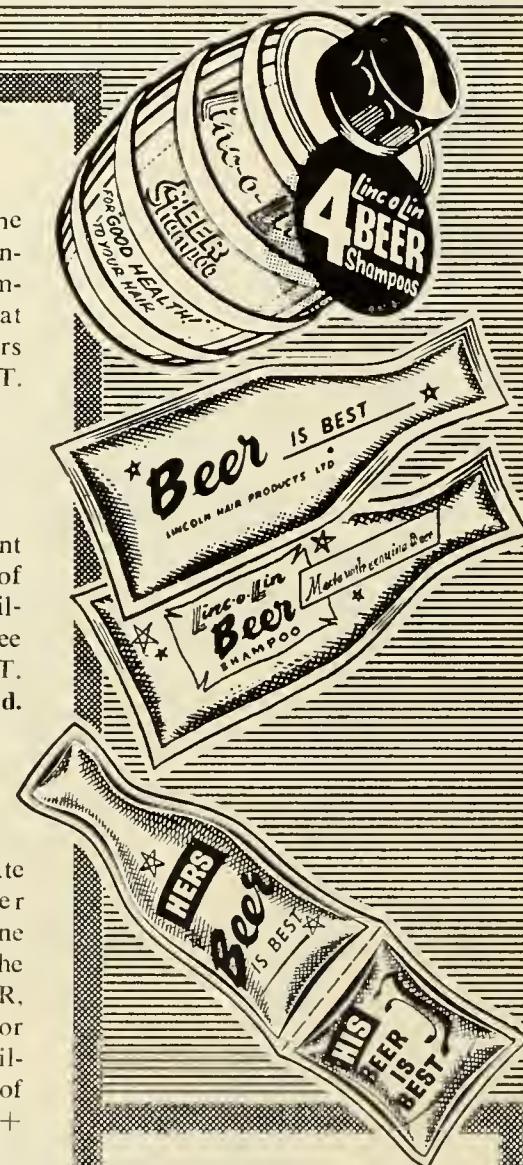
Irresistible polythene economy pack—contains at least 4 shampoos, and retails at 2/6. Price to retailers 15/7½ doz. + 4/8 P.T.

**INDIVIDUAL
SACHETS**

now in convenient counter dispenser of 3 doz. Price to retailers 15/7½ per three doz. box + 4/8 P.T. Retail price 10½d. each.

TWIN PACK

Men, too, appreciate Linc-o-Lin Beer Shampoo—sell one for two at 1/2, the "bottle" for HER, the "tankard" for HIM. Price to retailers—display box of three doz. £1-1-8 + 6/6 P.T.



**CHRISTMAS
SELLING**

These products will be advertised in Christmas Shopping Features of Women's magazines. The "Baby Barrel" is transformed into a gay "tree" gift by a delightful "Cat" Crowner.

IF YOU ARE LOOKING FOR A TABLET MANUFACTURER TO HANDLE YOUR PRODUCT
BE IT LARGE OR SMALL, IN THOUSANDS OR MILLIONS, WHY NOT

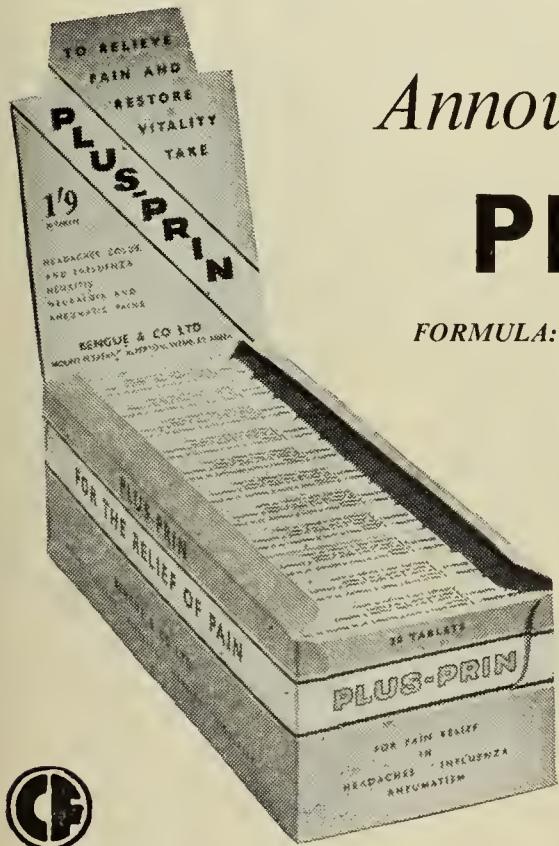
CONTACT ONE OF THE FOREMOST MAKERS WHO HAVE TAKEN PRIDE IN

MANUFACTURING TABLETS & PILLS FOR MANY YEARS



RICHARD DANIEL & SON, LTD. DERBY

Write us at Mansfield Road or ring Derby 40671 (Ten lines)



Announcing...

PLUS-PRIN

FORMULA:	Acid Acetyl Sal.	.. .36	Aneurine Hyd.	1 mg.
	Alumin. Glycinate	.. 0.06G	Riboflavin	1 mg.
	Alumin. Hydroxide	.. 0.06G	Nicotinamide	10 mg.

PLUS-PRIN is a buffered aspirin, rapidly absorbed and with B. Vitamins. This new analgesic is recommended for rapid relief of pain in chronic rheumatism, headache, neuralgia and dysmenorrhoea. This is a particularly appropriate form of aspirin for alleviating the symptoms of influenza when the normal vitamin B level is lowered by a febrile condition.

PACKS: Cartons containing 20 tablets, strip packaged
Attractive display outer holding 12 cartons of 20 tablets

Price to you—1/2d. (inc. P.T.) for 20 tablets
Retailing at—1/9d. (inc. P.T.) for 20 tablets

Profit of 33½% on retail price including Purchase Tax

BENGUE & CO. LTD. · MOUNT PLEASANT · WEMBLEY · MIDDLESEX



2 NEW ACME FLASKS



"RIPPLE" DE LUXE

- ★ NEW & EXCLUSIVE NYLON STOPPER
tight sealing, non-odorous, non-tainting
- ★ NON-DRIP POURER
- ★ DISTINCTIVE RIPPLE FINISH

5 SIZES

4 COLOURS

Capacity	Retail Price Incl. P.T.
8 Fl. oz. (SLIM)	5/11
16 Fl. oz.	6/9
22½ Fl. oz. (NEW 4 CUP SIZE)	8/9
30½ Fl. oz.	10/6
36 Fl. oz.	11/6

RED
GREEN
CREAM
BLUE

ALL ACME FLASKS are fully tested and guaranteed to keep liquids PIPING HOT or FREEZING COLD under all conditions

"TARTAN" DE LUXE

- ★ NEW & EXCLUSIVE NYLON STOPPER
with COLOUR MATCHING TOP, tight sealing, non-odorous, non-tainting
- ★ NON-DRIP POURER
- ★ GAY & COLOURFUL TARTAN FINISH
(Red or Green)

3 SIZES

SUPPLIES IMMEDIATELY
AVAILABLE THROUGH
ACCREDITED WHOLESALERS

Capacity	Retail Price Incl. P.T.
8 Fl. oz. (Squat)	6/6
16 Fl. oz.	7/3
36 Fl. oz.	12/3



Full details & illustrated literature from
ACME VACUUM FLASK CO. LTD.

Sales Executive Office
BICESTER ROAD, AYLESBURY, BUCKS.
Telephone : Aylesbury 2511 (6 lines)
Factory : Phoenix Works, Bridgend, Glamorgan

NOW ONE OF THE WORLD WIDE ANTIFERENCE GROUP OF COMPANIES

ACME

YOUR GALENICAL SUPPLIES THIS WINTER

This winter you will be using regular supplies of galenicals, for your own specialities or for wholesale distribution to the dispensing chemists. In either case you will find Stafford-AllenS Galenicals to be, as always, of the highest and most reliable standard, and available for prompt delivery. Up-to-date equipment and stringent analytical control ensures this traditional "Standard of Reliability."

**LIQUID EXTRACTS • TINCTURES • EMULSIONS
INFUSIONS • LIQUORS • SYRUPS • DECOCTIONS
ELIXIRS • ETC. ETC.**



Galenical Production at
StaffordAllenS



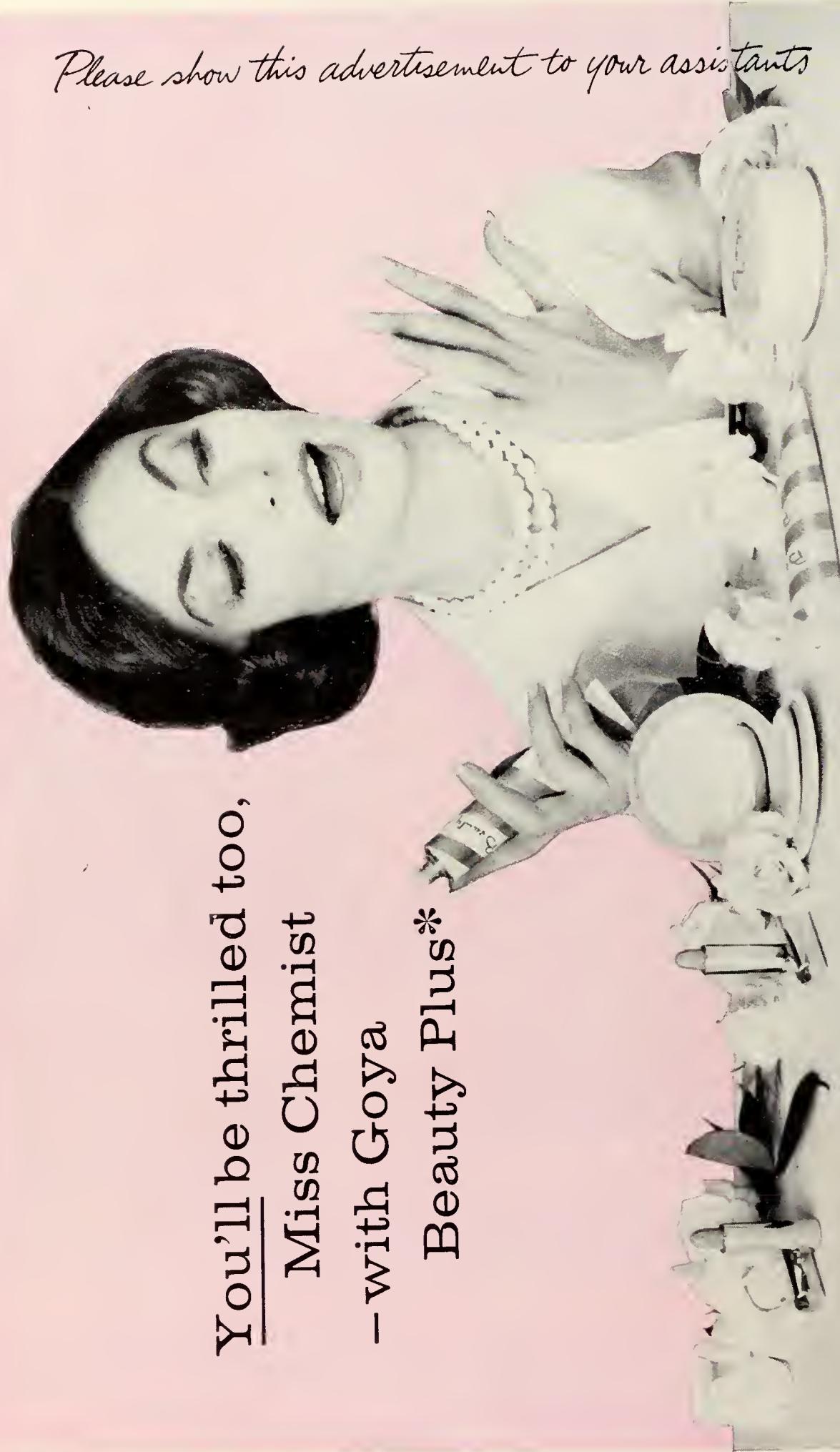
STAFFORD ALLEN & SONS LIMITED, WHARF ROAD, LONDON, N.I

Telephone : CLERKENWELL 1000.

Telegrams : STAFALENS NORDO LONDON
TAS/AL 512

Please show this advertisement to your assistants

You'll be thrilled too,
Miss Chemist
— with Goya
Beauty Plus*



* The new all-in-one beauty cream in a plus-size tube

Please show this advertisement to your assistants

Nobody is in a better position to know than you, Miss Chemist, why new Goya Beauty Plus is the most exciting cream for years! Isn't it a marvellous idea? One cream to do the work of many creams. One complete beauty cream in a whopping big tube. The cream that every woman (you included) needs for her skin-care routine.* A joy of a cream to sell. One you can easily persuade your customers to try. Because new Beauty Plus is so kind and so pure you can recommend it for any type of skin—oily, medium or dry.

*The Beauty Plus formula was arrived at only after Goya had questioned thousands of women on their skin-care needs.

AS A SOOTHING CREAM,
Beauty Plus is wonderfully effective. Tell your customers to apply it generously on chapped hands and lips, to use it for all skin care.

Beauty Plus is being launched this month, in a nation-wide campaign. Every major women's magazine will be carrying an advertisement to help you sell the new Goya beauty cream!

AS A NOURISHING CREAM,
Beauty Plus is wonderfully effective. Tell your customers to leave it on overnight to erase tiny lines, to keep the skin moist and firm.

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Beauty Plus is wonderfully effective. Tell your customers to use it night and morning—for a spotlessly clean skin, a clearer, fresher look.

First it was perfume—
now it's cosmetics as well—
there's the magic of success
about the name **Goya**

First choice

*in all common
infections of
the mouth
and throat*



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- * **RAPID BACTERICIDAL ACTION**
- * **PROLONGED EFFECT**
- * **SOOTHING**
- * **NON-TOXIC**
- * **NON-SENSITISING**
- * **ECONOMICAL**

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BOOTS PURE DRUG COMPANY LIMITED • NOTTINGHAM • ENGLAND

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U·M·P SERVICE *caps the lot!*

CAPS

A comprehensive range of STANDARD and PROPRIETARY caps made from urea and polythene materials both in flowerpot and other shapes.

The ORIGINAL U.M.P. VALVE-TYPE WADLESS CLOSURE (patented) is an exclusive feature showing economies.

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U.M.P. products embodying latest developments give better reliability and sales appeal and include Decora Shoulder, Weltex Base Seal, Oriseal nozzle, etc.

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A complete Plastics Service including Vacuum Forming and our highly specialised "Lamforte" (Reinforced Plastics) Products.

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*For Tubes
and Plastics*

HERE'S a real Blonde DIANA DORS' OWN individual shampoo



Diana Dors
Gardenia .
SHAMPOO

Order through your wholesaler or through the distributors:
DIANA DORS (COSMETICS) LTD.,
66 Great Eastern Street, London, E.C.2.

★ Bombshell



All your feminine customers must have envied the lovely hair of that glamorous star of stage, screen and television, Miss Diana Dors.

Now, on every T.V. station and in all the most important women's papers Miss Dors is going to reveal one of her secrets, the exciting shampoo especially made for her—the only shampoo she uses, the one and only shampoo like it in the World.

It is called after her, "Diana Dors gardenia Shampoo," and it is just as good for brunettes as for blondes.

You know enough about the results T.V. can bring to realise just what a demand these broadcasts will produce.

Make sure you have Diana Dors Shampoo in stock before October 28th and 'phone us or your wholesaler for more the moment the demand starts.



ON EVERY T.V. STATION

in peak hours starting November 4th, and in all the important women's papers including the "Daily Mirror", "Daily Sketch", "Woman", "Woman's Day", "Woman's Own", "Woman's Realm", etc., etc.

Diana Dors shampoo

retails at

ONLY 9^D

Terms 5/6 per dozen
less 5% Special Dis-
count. Displays
supplied free.

Be sure you are ready before this outstanding campaign starts

HIGHEST TOLERATION
PRACTICAL
DOSAGE COMBINATIONS
SATISFACTORY
CLINICAL RESPONSE

Physicians therefore specify

Calcium B-PAS WANDER

and

B-Pasinah WANDER

(calcium B-PAS Wander plus isoniazid)

*in the domiciliary
Chemotherapy of Tuberculosis*

B-PAS (Wander), 4-benzoylamino-2-hydroxybenzoic acid, first introduced by our Research Laboratories in 1948, is the drug of choice in regimens comprising PAS in concurrent therapy.

In the form of its calcium salt, it induces only minimal side-effects as compared with sodium PAS, and because of its high acceptability guarantees as far as possible that domiciliary patients take their medication.

CALCIUM B-PAS (Wander)

Powders: Tins of 150 and 400 x 3.5g. envelopes
Cachets: " " 80 and 400 x 1.0g.

Also available: Sodium B-PAS (Wander)
in 1.5g. Cachets.



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Powders: Calcium B-PAS (Wander) 3.5g.
Isoniazid 87.5mg.

Tins of 150 and 400

Cachets: Calcium B-PAS (Wander) 1g.
Isoniazid 25mg.
Tins of 100 and 500

Price details of all forms of PAS from the Medical Dept.

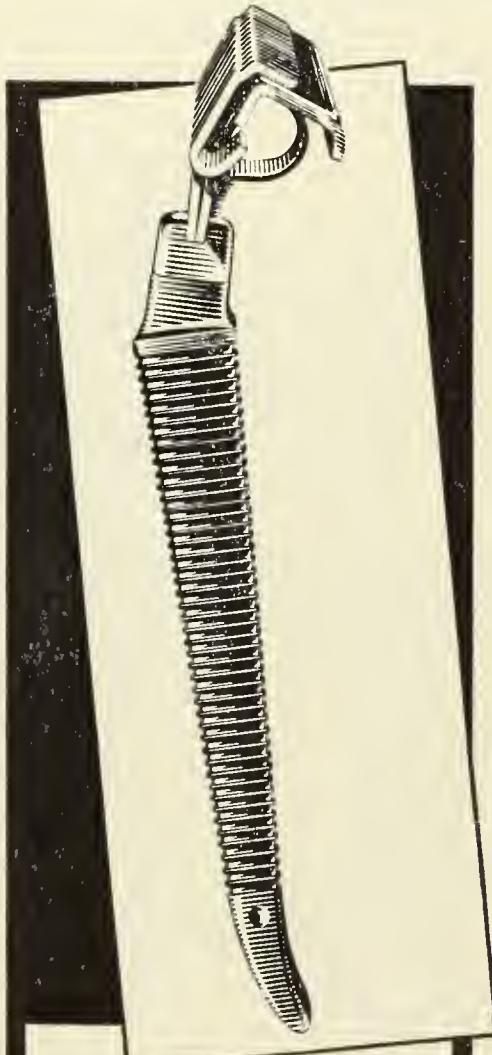


All Wander tuberculostatic products are available from usual wholesalers or direct from

A. WANDER LIMITED, 42 UPPER GROSVENOR ST., GROSVENOR SQ., LONDON W.1

What a gift!

**THIS SENSATIONALLY SUCCESSFUL RAZOR
MEANS BIG CHRISTMAS TRADE FOR YOU**



NEW PAL

INJECTO-MATIC RAZOR

Here's the razor that men and women will be giving for Christmas this year . . . the new Pal Injecto-matic . . . functionally designed for one specific purpose: to give the closest shave of all. Ever-Ready give a money-back guarantee on every razor.

Shaves closest of all!

**AND TREMENDOUS
EXTRA PROFITS FOR YOU!**

14 RAZORS TO THE DOZEN

DEAL No. 1 14 razors at 44/2 plus 13/3 P.T.

This Deal gives you a total profit of 33/7 on an outlay of 57/5! This means that you get an *EXTRA 13/- PROFIT* with every Deal No. 1 ordered. (Retail Price 6/6 each including magazine of 10 blades)

7 RAZORS TO THE HALF-DOZEN

DEAL No. 2 7 razors at 22/1 plus 6/7½ P.T.

This Deal gives you a total profit of 16/9½ on an outlay of 28/8½! This means that you get an *EXTRA 6/6 PROFIT* with every Deal No. 2 ordered. (Retail Price 6/6 each including magazine of 10 blades)

**You can order now
as many Deals as you like**

Order from: Ever-Ready Razor Products Limited, Colquhoun Ave., Hillington, Glasgow, S.W.2 or through your usual wholesaler.

Supported by heavy advertising

All retailers who stocked this new razor when it was launched this spring report extraordinarily rapid sales. "It went off the display stand like snow melting," said one retailer.

Dramatic advertisements on TV and in the Press helped these phenomenal sales. So did the Display Stands.

For Christmas the advertising will be even heavier. Cash in! Accept the special offer *now* and use the Display Stands.

EVER-READY give a money back guarantee on every razor

PRECISION  PRODUCTS

Biggest-



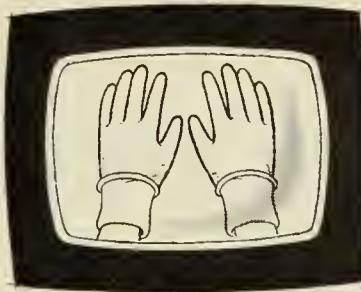
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Rubber-



glove

advertising!



**SUREGRIP
DOES THE
TELLING—
TO 17,000,000**

with the biggest-ever advertising for any rubber gloves! *Last year* millions of pairs were sold . . . and successful nation-wide advertising ensured that millions of pairs of hands cried out for Suregrip. *This year's* new Suregrip campaign will be screened time and time again to no less than 17,000,000 ITV viewers! Between now and March, when weather's raw and hands are sore, EVERY ITV network in the country will carry frequent 30-second Suregrip spots EVERY week—even the new North-Eastern station as soon as transmission starts in January!



**TO HELP
YOU
DO THE
SELLING—**

powerful Suregrip display material has been specially prepared for you. There's a big, eye-catching Suregrip dummy pack for your window . . . plus free window display service . . . plus attractive, colourful showcards "tieing in" with the Suregrip message that TV advertising is bringing HOME to millions! Send in your order today to the address below and ask for these *free* sales aids. Remember, rubber gloves sell by the million . . . and SUREGRIP can mean sure-fire sales for your shop!



**ORDER AND DISPLAY
SUREGRIP NOW!**

HOUSE GLOVES

LONDON RUBBER CO. LTD., HALL
LANE, CHINGFORD, LONDON, E.4

DISPLAY**Diuromil
NOW!**

*
worth-while profit on every sale—

Diuromil pays for prominence and attracts money. A 100-million press readership sees regular, consistent and forceful Diuromil advertising every year. That is why Diuromil on display means profit in the till for YOU. Link up with Diuromil national advertising now and make steady sales.

**100 millions see 'DIUROMIL' in the Press
— let them buy it from YOUR Counter**

Relief and Treatment for . . .

**RHEUMATISM, Fibrositis, Lumbago, Gout**

PHARMAX LTD., WESTERN HOUSE, GRAVEL HILL, BEXLEYHEATH, KENT.

A
PHARMAX
PRODUCT



Φ.T.S.

First in the field once again, with improvements in surgical stockings, Lastonet now introduce light-resistant rubber into their elastic net.

Because this largely prevents the deterioration caused to rubber by exposure to light, it enhances the efficiency and lengthens the life of Lastonet Elastic New Stockings.

With this added advantage, Lastonet Stockings will be even more widely prescribed on the NHS, and your profits must be increased.

No stock problems with Lastonet Stockings! No risk. Every stocking is individually made to the patient's measure. Quick delivery and an excellent profit margin are assured.

Lastonet
ELASTIC
NET STOCKINGS

Nylon or Cotton Send today for
stocking measurement forms
and display material.

LASTONET PRODUCTS LTD., CARN BREA, REDRUTH, CORNWALL

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Cotton Wools

B.P.C. QUALITY COTTON WOOLS

HOSPITAL QUALITY COTTON WOOL
(Drug Tariff)

Sterilised and Unsterilised in all weights, for
Home and Export.

Quantities labelled with
your own labels

*COTTON WOOL DISPENSER
(Pleated filling. Attractive Pack)

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for thermal, sound and vibration insulation
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Cotton Wools

Bleached and Unbleached Rolls from
2 in. to 40 in. wide, weights 3 oz. per
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**Only as much as is
needed is pulled out
at a time!*

Illmond Cotton Wool Dispenser Pack

Package has tuck-in
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sealed. Hygiene en-
sured. Elegant design
of pack makes it
perfect for a lady's
dressing table.

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THE CHEMIST AND DRUGGIST

ESTABLISHED 1859

The weekly newspaper for pharmacy and
all sections of the drug, pharmaceutical and
fine chemical, cosmetic, and allied industries

Official organ of the Pharmaceutical Society of Ireland
and the Pharmaceutical Society of Northern Ireland

Volume 170

October 11, 1958

No. 4103

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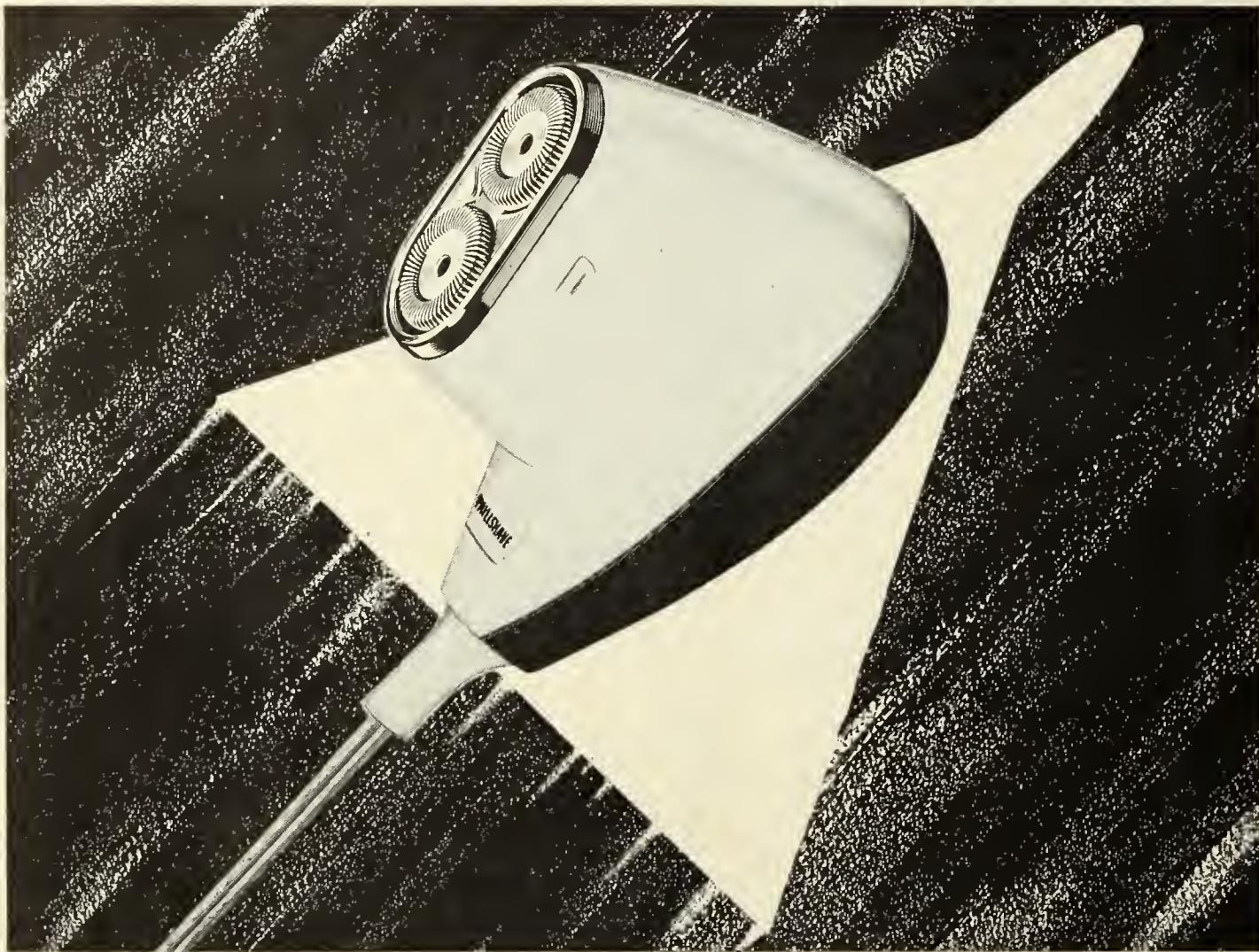
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which includes The Chemist and Druggist Diary and
Year Book, £2 10s. Single copies one shilling each.



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to a new high—with the 'Philishave' jet

It's the jet age right enough—the 'Philishave' jet age! For this new version of the world's top-selling dry shaver introduces the finest shaving technique Man has ever known. It shaves faster. It shaves closer. It shaves more easily and comfortably in every way. In fact, it's got everything—including mammoth advertising. That's why the 'Philishave' jet will be the top present for men this Christmas—better order your stocks right away!

The 'Philishave' jet incorporates:

40% increase in shaving area. Improved motor performance. Very quiet motor. Unique new design for even closer shaving. Larger hair-chamber for shaved bristles. New instant 'Press... Blow' Cleaning. New two-tone styling. Dual-voltage: AC/DC 110-130v, and 200-250v.

£8.15.0 (tax paid)

The other 'Philishave' models: Dual-volt £7.11.9 (tax paid). Standard-volt £6.16.0 (tax paid). Battery model £7.11.3 (tax paid).

The **PHILIPS**
PHILISHAVE *jet*

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Tomorrow's profits in your hand today!

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A PRODUCT OF



PHILIPS ELECTRICAL LTD

(PS974A)

The
CHEMIST AND DRUGGIST



Volume 170

OCTOBER 11, 1958

No. 4103

A Reading Chemist's Half-day SWITCH TO SATURDAY ALLOWED

A RESOLUTION approving an application by Stanley Bubb, Ltd., for permission for change of the half-day closing of their branch pharmacy in Oxford Road, Reading, from Wednesday to Saturday afternoon, was approved at a meeting of the Reading Executive Council recently, despite determined opposition.

Mr. H. Williams said that the pharmacists of Reading had great objection to it. There was difficulty enough in getting people to work on Saturday afternoon: "We all want to go to a football match." He did not see what would be gained by the change. The clerk read a letter from the company expressing a belief that the change from Wednesday to Saturday would be of advantage from the viewpoint of dispensing, and said that the Council had no good reason for saying "No"; he did not think they had any control over the question of half-day closing. Mr. Williams said that the hours of service had been fixed: from 9 till 6 on five days a week, and 9 till 1 on Wednesday. In exceptional circumstances the Council could alter the hours, but his point was that there were no exceptional circumstances. Dr. E. B. Berry commented: "Our main concern is the patients. It is a nightmare for Wednesday patients to get prescriptions made up, and it is nice to know that there will be at least one chemist open in the town." Mr. Williams declared that arrangements had been made whereby a prescription could be made up at any time of the day or night in Reading. "You have no complaints from any of the patients that they have not been able to get prescriptions made up on Wednesday evenings. Two chemists are open in Oxford Road every Wednesday evening from 6 till 8." The chairman remarked: "We have doctors saying that in fact Wednesday afternoons are a problem to patients." Mr. Williams insisted that the Council had a right to refuse permission. He proposed that the matter be referred to the hours-of-service committee, but his motion was lost and the original resolution was approved.

Examination Results

SUCCESSES IN ENGLAND AND WALES

THE following candidates satisfied the examiners in the Intermediate examination held by the Pharmaceutical Society in England and Wales in September:—

LOCK, Joan S., Lewes; LOWEN, J. E., Sheerness; McAULEY, Charles, Southwick; MONK, R. H., Guildford; NIJKAR, M. S., Guildford; ODURO-YEBOAH, Joshua, Bristol; PAYNE, W. F., Hartfield; PEACOCK, Mary T., Farnborough; PERKINS, Brian, Tredgar; POCKNALL, David, Ramsgate; RATTLE, Pamela M., Nottingham; SUTTON, P. J., Tunbridge Wells; WALDRON, Tom, Cannock; WILLCOX, R. C. J., Stroud; WILLIAMS, John, Caerphilly.

Statutory Committee

A DECISION POSTPONED

THE Statutory Committee of the Pharmaceutical Society declared itself on October 1 unable, without seeing the person concerned, to come to a satisfactory conclusion in a case before it. The Committee found it established that he had been guilty of theft as alleged in the Notice of Inquiry, but had heard evidence indicating that he considered repayment to be a debt of honour which he must and would repay. The person concerned had not attended at the hearing, and the chairman pointed out that, should the person find it impossible to provide the money for his journey to London, it was open to him to make application to the Benevolent Fund Committee of the Society. The inquiry was adjourned until November 5.



RETIREMENT PRESENTATION: Mr. A. Forsyth (managing director of T. & H. Smith, Ltd., Edinburgh) presents to Mrs. Ena Whitcomb, who has represented the company in the London area for the past nine years, with a set of cut Edinburgh crystal glasses as a parting gift from her colleagues. Mrs. Whitcomb recently resigned after fifteen years with the company. She is well known to drug buyers in Central London and is thought to be possibly the first woman representative to be employed in the wholesale drug trade.

Chemical Workers' Pay

RATES AND DIFFERENTIALS CHANGED

INCREASES of 7s. a week for men and 5s. for women have been negotiated on basic rates in the drug and fine chemical manufacturing industry, and the wage structure has been revised, widening the difference between the rates paid to the various grades by 2s. for men and 1s. 6d. for women. With the increase in the basic rate some men in the industry will now have a total wage advance of 11s. a week. About 20,000 workers are affected by the new agreement, which is to apply from the end of September for the changes in the wage structure and from the last week of August for the basic rates.

Restrictive Practices

DIRECTION TO THE REGISTRAR

THE Board of Trade has now sent a direction to the Registrar of Restrictive Trading Agreements permitting him to take proceedings before the Restrictive Practices Court in respect of any agreement not described in the Schedules to earlier directions. Under the directions previously issued, the Registrar was required to give priority to agreements concerning goods scheduled in those directions before starting proceedings in respect of any others on the Register. The new direction does not affect agreements on which proceedings have been started, but the Registrar may now start, at his own discretion, proceedings in relation to any other agreement on the register.

IRISH NEWS

THE REPUBLIC

Examination Results

PHARMACEUTICAL SOCIETY OF IRELAND

THE following were successful candidates in recent examinations held by the Pharmaceutical Society of Ireland:—
FIRST PROFESSIONAL EXAMINATION: Pass, Mary S. Conway; Canice A. Flynn; N. P. Hennigan; Margaret A. Mulholland; A. F. O'Dowd; Mary Walsh, SECOND PROFESSIONAL EXAMINATION: First Class Honours, J. F. Fitzpatrick; Second Class Honours, June I. Bowman; V. J. Harte; J. McCormack; E. J. O'Grady; J. C. Ryan; Pass, Margaret Flynn; D. McLaughlin. PRE-REGISTRATION: Pass, P. J. Griffin; R. Wilson; P. J. Sullivan; Ann M. McLaughlin; A. J. Quirke; Ita Mulligan; M. Kealy; Rosemary Lynch; Grace Carr; Carmel Feeney; F. A. O'Rourke; P. G. Flynn; T. Teahan; Helen Gilchrist; Barbara M. McKeever.

Pharmaceutical Council

OUTGOING MEMBERS RE-ELECTED

THE result of the election for seven members of Council of the Pharmaceutical Society of Ireland was made known on October 6, when it was learned that all the seven outgoing members had been re-elected. They were Messrs. Hugh P. Corrigan (vice-president), who headed the poll, P. A. Brady, T.D.; C. J. Cremen, J. Gleeson, V. McElwee, F. J. Robinson, and T. B. O'Sullivan.



The Committee of the Society: Front row, Messrs. R. Swindells, G. T. Johnson, J. L. Wrathall, Marsden Lewis and Arthur Cottam. At rear, Messrs. W. Scott, George Jamieson and Frank Jamieson.

SOUTH LONDON AND SURREY GOLF

A year's awards of the Pharmacists' Golfing Society

AT a supper at Shirley Park Golf Club recently the awards competed for during the South London and Surrey Pharmacists' Golfing Society's season as well as the 1957 replicas were presented to the winners. A record number of seventy-one attended. The winners, each of whom was greeted with appropriate congratulatory remarks from the year's captain (Mr. J. L. Wrathall) were:—

Scotia bowl, C. J. Martin, Ifield; replica, M. Lewis; *Cupal prize*, A. F. Reary, Coulsdon. *A. Cottam tankard*, J. L. Wrathall, Shirley Park. *G. G. Watt tankard*, F. Jamieson, Shirley Park. *F. Widocks memorial trophy*, R. Healey, Lang-

ley Park; replica, T. Powell. *Bobby Locke trophy*, M. Bloodworth, Walton Heath; replica, G. Philip. *Pfizer meeting prize*, F. Jamieson, Shirley Park. *Ifield Sunday meeting prize*, C. J. Martin, Ifield. *President's prize*, A. H. Barnetson, Mitcham. *C. Birchmore tankards*, R. Healey, Langley Park, and D. I. Hoborn, Walton Heath. *Ucal cup*, H. W. Weeks, Surbiton. *Verona trophy*, M. Lewis, Shirley Park; replica, A. H. Barnetson. *P. Thorp tankard*, M. Lewis, Shirley Park. *Founders trophy*, G. T. Johnson, Betchworth; replica, D. Spier. *R. Healey prize*, G. T. Johnson, Betchworth. *Croydon shield*, R. Healey, Langley Park. *Unichem trophy*, R. Healey, Langley Park. *Cow & Gate trophy*, D. I. Hoborn, Walton Heath; replica, G. Penman. *G. G. Jamieson prize*, J. L. Wrathall, Shirley Park. *Marsden Lewis prize*, J. Widocks.



In order from top left to bottom right: The Unichem trophy, won by R. Healey (Langley Park), is presented by Mr. E. Skene. Mr. V. Powell presents the Verona trophy to M. Lewis (Shirley Park). Mr. George Johnson receives the founders trophy from the captain of Shirley Park Golf Club (J. Blanshard). Mr. R. Swindells presents the Croydon shield to R. Healey (Langley Park). Mr. George Jamieson (Secretary of the Society) presents the Bobby Locke trophy to Mervyn Bloodworth (Walton Heath). Mr. C. J. Martin receives the Scotia bowl from Mr. J. M. Whitelaw.

NEWS IN BRIEF

THE British Plastics Federation, with the collaboration of the Board of Trade, is exhibiting at the International Plastics Fair, Dusseldorf, Germany, October 17-25, 1959.

A DIPLOMATIC conference to consider revision of the International Industrial Property Convention on Patents and Trade Marks began in Lisbon on October 6. There are fifty member countries. The Convention was last revised in London in 1934.

ADVISORY leaflet 179, "Leather-jackets," just issued by the Ministry of Agriculture, Fisheries and Food (H.M. Stationery Office, price threepence), outlines measures (using sprays, dusts and poison baits) for keeping them under control.

THE second supplement to the estimated world requirements of narcotic drugs in 1958 was published recently by the Stationery Office, price 1s. 9d. [The original estimates were published in February and the first supplement in August (C. & D., August 9, p. 133).]

AFTER having admitted breaking a Chester pharmacist's window, William John Scryminger, a casual labourer of no fixed address, was sent to prison for three months by Chester magistrates on October 1 and fined 10s. for being drunk and disorderly.

A MINOR explosion and fire occurred at Smith Kline & French Laboratories, Ltd., Coldharbour Lane, London, S.E.5, on September 26. The fire damage was confined to a chemical store and a laboratory, situated some distance from the production area, and supplies of the company's products are not affected.

BY the end of August 6·8 million children under the age of fifteen in Britain had been registered for vaccination against poliomyelitis. That represented about half the number eligible and was a disappointingly low figure, said the Minister of Health (Mr. Derek Walker-Smith) on October 3.

AT Preston, Lancs, on October 1, Ann Bernadette Kennedy, Heywood Street, Moss Side, Manchester, was sent to prison for six months for supplying Indian hemp to a West African prisoner in Preston prison. On a second charge of conveying the hemp to a prisoner she was fined £5.

PROFESSOR Kenneth Bullock and Mrs. Bullock were received by the Prime Minister of the Republic of Ireland (Mr. Eamon de Valera) at Government Buildings, Dublin, recently. Professor Bullock, who was in Dublin to conduct the examination in pharmaceutics for the Second Professional examination of the Pharmaceutical Society of Ireland, was introduced to Mr. de Valera by Professor Richard Timoney (dean of the College of Pharmacy), who was accompanied by Professor C. S. O'Connor.

LOCAL OFFICERS**PHARMACEUTICAL ASSOCIATION**

London County.—President, M. Lewis; Vice-president, I. H. Williams; Secretary and Treasurer, H. L. Crossley, 61 Beulah Road, Walthamstow, London, E.17. [Corrected note.]

TOPICAL REFLECTIONS

By Xrayser

Aqua Vitae

Published the other day, a report by the National Association of Mixed Clubs and Girls' Clubs states "We are, after all, dealing with that generation which was born to cod-liver oil, orange juice and the perquisites of the Welfare State. This may be the reason, or one of the reasons, for the overwhelming energy which the adolescent has in abundance." On the same day a panel of well-known people, whose task it is to answer any question on the spur of the moment, found themselves faced with the stupendous task of dealing with juvenile delinquency. The question was topical, but the problem posed was extremely difficult in the face of an invited audience, and in the knowledge that the opinions expressed were being broadcast over the whole country. There seemed to be a measure of agreement that one of the principal causes was that the youth of today has an excess of physical energy to work off, contributing, with greater leisure and more money than earlier generations to juvenile delinquency. If the two statements are taken in conjunction, only one conclusion can be drawn. And if the premise is correct, what is to be the future of Northern Ireland? I read (p. 356) with alarm and apprehension that a campaign has been launched in Ulster for the collection of rose-hips: it is hoped that anything up to 250 tons may be collected. After suitable treatment in the factory, the vitamin will appear in a highly-charged form in bottles, to be fed to infants and children. Is it too late to warn the population of Ulster of the potential dangers of this new fire-water?

Thorn-apple

A reference under "Onward with Galen" (p. 338) to stramonium suggests that the plant is rare in Britain, and that may well be so today. Many of the wild plants of our hedgerows are in danger of disappearing, since conditions along the roads have altered considerably since the introduction of petrol-driven vehicles. Hedges themselves have disappeared, and some plants do not take kindly to wire fencing. Long, narrow strips of land between roads and fields, have been sacrificed to road widening, and nature has suffered badly in the process. Yet 100 years ago thorn-apple was found quite extensively, principally "about dunghills and rubbish" according to Brook. That author says that, on sleeping in a bed where the leaves are strewn, giddiness of the head and stupor have been produced. The plant was used as a narcotic, and such famous people as Bergius and the Baron Stoerck of Vienna used it in the treatment of epilepsy and convulsions. Dr. Cullen confessed to a neglect of the plant, because as he said, "I have no doubt that narcotics may be a remedy in certain cases of epilepsy and mania, but I have not learned to distinguish the cases to which such remedies are properly adapted."

Bicentenary

The bicentenary of the birth of Lord Nelson has brought many references to the beautiful Lady Hamilton. For some years prior to her marriage the lady appeared in the company of an eccentric medico called Dr. James Graham. Graham, who held an Edinburgh degree in medicine, ran an establishment called the "Temple of Health" in Pall Mall, and took to touring the country to give lectures. The lovely young woman who appeared on a pedestal at the lecture—Vestina—became Lady Hamilton in 1791. Graham published several pamphlets, one of which was described by him as "A new and curious treatise of the Nature and Effects of Simple Earth, Water and Air, when applied to the Human Body; How to live many weeks, months and years without eating anything whatever." The eccentric doctor advertised that his lecture was at once medical, moral and religious, "the Technical Terms and nonsensical jargon of the followers of the Medical Trade or Farce being avoided." He grew in stature until he appeared as a special delegate from Heaven to announce the millennium, and shortly after was put under restraint by order of the magistrates.

OPENING STAGES OF C.F. HEARING

Questions on the purposes and methods of the Federation

THE first case under the Restrictive Practices Act, 1956, began in the Restrictive Practices Court (Queen's Bench Court 7 at the Royal Courts of Justice), London, on October 6. Its object was "to inquire into the agreement between members of the Chemists Federation." The Court president was Mr. Justice Devlin, and the other members of the bench were Mr. Justice Upjohn, Lord Cameron, Sir Godfrey Mitchell, Sir Stanford Cooper, Mr. W. L. Heywood, and Mr. W. G. Campbell (see p. 387).

Procedure on the exchange of statements having been already agreed (*C. & D.*, July 19, p. 52, and August 2, p. 109) MR. T. G. ROCHE, Q.C., opened the case for the Chemists Federation.

He outlined the structure of the membership of the Federation, its functions in comparison with those of the Proprietary Association of Great Britain and the structure and function of the Federation's standards committee. After a product had passed the tests and had gone on to the C.F. list, he said, it became subject to the main restriction: that it should reach the public through a retail chemist or other authorised user only. Mr. Roche said that the Federation had had to threaten stop-list action only twice since the 1939-45 war, and in that period had operated it only once. Any chemist could obtain C.F. products; there were about 4,500 pharmacies not members of the Federation; mainly they belonged to multiple concerns such as Boots, Ltd., and Timothy Whites & Taylors, Ltd. The restriction did not stop any chemist selling non-C.F. products.

"We say that the work of the standards committee is a benefit to the public because the C.F. goods sold to the public have been tested." Wholesalers had to "prove they are good wholesalers" before being accepted into membership. That was beneficial to pharmacy and to the public. Any restriction on the sale of medicines by non-chemists was reasonably necessary to prevent injury. One could hardly fail to agree that restriction of the sale of medicines to pharmacists, who gave advice, did confer a benefit on the public.

Mr. Roche went on to discuss the economic factor. He pointed out that one in four of the sales made by a chemist were under the National Health Service. Without the profit made on non-N.H.S. sales the small chemist would have to go out of business. That would create a hardship to the public—particularly in the country, where pharmacies were scattered. He pointed out on the written evidence submitted to the court that 43 per cent. of chemists' shops made a profit of less than £200 a year after a notional salary had been subtracted for the proprietor.

He gave an outline of the history of the profession, with particular emphasis on the imposition of stamp duty on proprietary medicines, and the effect of its abolition and subsequent legislation. Mr. Roche pointed out that people often went to chemists for advice and

often advice was proffered whether asked for or not. That was beneficial to the public. Mr. Aldington had given an example of that in his written evidence. The Chemists Federation maintained that the sale of all medicines should be through chemists only, and that that would provide protection for the public. They believed that there was a cumulative danger: any alteration to the position or any substantial increase in the sale of proprietary preparations by grocers or drug stores would lead the public to regard the purchase of medicine as of no great importance. Replying to a question by Mr. Justice Devlin, Mr. Roche pointed out that the closing of small chemist's shops in the country might make the National Health Service almost unworkable.

Referring again to the standards committee, Mr. Roche said that C.F. products were the only ones that chemists knew had been subjected to independent scrutiny—the chemist could recommend them knowing that they had been tested. He cited an application made by Riker Laboratories, Ltd., for the inclusion of a rauwolfia preparation, Tranquilex, on the list. The C.F. council, on the report submitted by its standards committee, had agreed to its inclusion on the "A" list, which meant that it should not be advertised to the general public. Later they had written to the company pointing out that the product was still being advertised to the general public, and that the preparation would have to come off the "A" list and go on to the "B" list. The C.F. council had drawn the attention of the Pharmaceutical Society to its concern about the supply of rauwolfia preparations direct to the public, and the next year the Society had issued a recommendation to its members to supply those preparations only on prescription.

First Witness

Mr. Roche called as his first witness MR. R. H. KEMP (secretary of the Federation) who was asked to give details of conditions in retail pharmacy in the 1920's and 1930's, before the formation of the Federation. Mr. Kemp described trading conditions then as "extremely difficult"—everyone in retail business, pharmacy or otherwise, was fighting to prevent falling turn-over. They began taking in goods not normally stocked by them and many non-chemist traders began to take in proprietary medicines, both because they showed a higher margin of profit than those which normally comprised their stock-in-trade and because they were widely advertised. At that time the average turnover was £24 per pharmacy per week. Many pharmacies had a turnover of less than £1,000 a year and a large number were forced out of business.

MR. CYRIL HARVEY, Q.C. (counsel for the Registrar) asked Mr. Kemp if he could give any figures of the number forced out of business. Mr. KEMP replied that any figure he gave could

only be approximate and MR. HARVEY said he would not press the point.

MR. HARVEY asked Mr. Kemp why it was that, despite the fact that there had been an average of nearly five extra manufacturers added to the list, the total number of C.F. manufacturers had not increased over the past few years. MR. KEMP explained that some companies and products had been taken over by existing members. MR. HARVEY said there were actually one or two fewer manufacturer members than there were six or seven years ago; the number of resignations from the list equalled the number of new applications.

MR. KEMP said that there were economic reasons. Some of the firms had gone out of business; in other cases small firms had been absorbed in large firms; and there were other cases where manufacturers had decided to change their policy and, because it was not compatible with C.F. policy, they had resigned.

MR. HARVEY: I know it is not the printed object of the Federation, but it is the aim and object to get as many manufacturer members as possible?—MR. KEMP: True.

MR. HARVEY: Although the rules and regulations only require that products that are on the C.F. list should be sold by chemists only, the aim is that anything that can be called a medicine should be sold by chemists only?—MR. KEMP: That is the policy we believe in.

MR. HARVEY: It is true to say that it will not work?—MR. KEMP: We are on the way to achieving it. MR. HARVEY: But surely you are no nearer reaching your aspirations? Your membership has not altered for the past few years.—MR. KEMP replied that, of the new members, some were companies with a vast range of products.

MR. HARVEY: There are more Aspro tablets sold each month than any of the other brands of aspirin put together?—MR. KEMP: I could not say. That might be so.

MR. HARVEY: If you could get the manufacturers of Aspro as members you would welcome them with open arms, wouldn't you?—MR. KEMP: If their advertising and their formula passed the standards committee,

MR. HARVEY: If Aspro-Nicholas, Ltd., came to you, would you not receive them with open arms? Would you put any obstacles in their way?—MR. KEMP: They would be treated the same as any other manufacturer.

MR. HARVEY: I am suggesting that far more importance is attached to the getting of a manufacturer to put his product on the list than is put on the quality of the product.—MR. KEMP: I do not agree.

MR. HARVEY: We have been referred to the splendid work which the C.F. committee did with Tranquilex, but they have also kept items on the list which are of no value at all. What do you say about kidney and backache pills [a proprietary brand of which] has been kept on the list?

MR. ROCHE interjected to point out that Mr. Kemp was not chairman of the standards committee. Mr. Harvey continued by stating that the juniper pills had been retained on the list after all the existing list products had been examined by the standards committee "although it was roundly condemned by all the doctors concerned." THE PRESIDENT pointed out that Mr. Kemp need not answer the question—MR. KEMP: I have no knowledge of that matter.

Second Day's Hearing

At the resumption of the hearing on the second day, MR. KEMP again went into the witness box. MR. HARVEY explained that he wished to ask Mr. Kemp questions on the Federation's policy. The product he was interested in was briefly called "junips." A letter had been sent by Mr. Kemp to Dr. J. H. Harrison enclosing samples of juniper back and kidney pills for the doctor's observations. In his reply Dr. Harrison had said that he regarded them as self-medication of the worst type. He said that the formulas were "relics of a century ago and should have no place in modern therapeutics." They were potentially dangerous. The Federation, said Mr. Harvey, was not bound to accept the opinion of any one consultant. As manufacturer members had access to high technical opinions they could use them, as was done in that case. One of the opinions given by a technical employee of one of the members reported that "on medical grounds I can find no justification for any of these products" and had endorsed Dr. Harrison's comments. Mr. Harvey pointed out that the products were still not deleted from the C.F. list although the Federation recommended to the manufacturer that he should delete certain words from his literature. Was that what happened?

MR. KEMP replied that the Federation had recommended a change of certain of the claims made for the products. MR. HARVEY: You wrote to the manufacturer stating that the council had decided to accept such products provided the claims made were reasonable. Those two items are still on the list.—MR. KEMP: They are. We have here a treatment that has been popular over the past century, particularly in the Midlands and the North. My committee and council considered the undesirable claims but thought, however, that whatever action was taken by the council, even by the removal of the products from the list, there would be a continued demand from the public for them—from people used to that type of self-medication. In view of the dangers emphasised by Dr. Harrison it was thought that it would be better if they were distributed by pharmacists rather than by general shopkeepers. They were retained on the list when the claims were made reasonable.

Were the retail pharmacist members of the Federation told that the medical authority to whom the preparations were submitted had said that they were potentially dangerous, and had no place in modern therapeutics?—MR. KEMP: I would say that the pharmacist by virtue of his training would already know that.

MR. HARVEY: I have here Burroughs Wellcome Tabloid brand aspirin and I have Aspro tablets. Chemically, therapeutically, they may be regarded as identical?—MR. KEMP: I agree.

MR. HARVEY: Burroughs Wellcome Tabloid aspirin is sold only by chemists—it is on the C.F. list. Aspro is also sold largely by chemists; it is also sold at village shops. It is clear that the makers of Aspro will not put their product on the C.F. list?—MR. KEMP: It is not likely.—MR. HARVEY: You disapprove altogether of the product being sold by village shops?—MR. KEMP: I do on principle.

MR. HARVEY: What public interest do you say is being served by the Burroughs Wellcome product being restricted to the chemist's shop?—MR. KEMP: By the fact that no extravagant claims are made by the manufacturer for that particular product.

MR. HARVEY: But Aspro is also sold in chemists' shops. You claim that some public benefit is being conferred by restricting the sale of the product?—MR. KEMP: The advertising of the Burroughs Wellcome product is controlled by the C.F. council and committee. No extravagant claims are made for it.—MR. HARVEY: But [Aspro] can also be bought in chemists' shops.—MR. KEMP: That is in accordance with our policy that all medicines should be sold through chemists.

MR. ROCHE showed Mr. Kemp an advertisement for Aspro tablets and asked Mr. Kemp if the standards committee would have passed that advertisement.—MR. KEMP: Definitely no.—MR. ROCHE: Have you seen the Aspro advertisements on "one degree under"? What do you think of them?—MR. KEMP: I think that that is pure advertising and that it would induce members of the public to take acetylsalicylic acid probably when it would be of no use to them and might even be wrong for them to take it.

MR. G. E. MANN then took the witness stand, and gave evidence on the irritant action of aspirin and the possible dangers of its misuse.—MR. HARVEY: If you have a product which the manufacturer wants on the C.F. list it will go on the list not because it is a good medicine but because your policy is that all medicines should be sold by chemists only?—MR. MANN: That is certainly the policy of the Federation. The backache and kidney products were retained on the list because they had been on originally. The claims were regarded as excessive and were amended with the co-operation of the manufacturer. We thought that provided the sale was under the control of the pharmacist they should be retained.

MR. HARVEY: I do not know how many other instances there are but that is not just a unique case. There is the case of Neo-Passiorine and Passiorine. The committee decided to submit them for Dr. Harrison's comments. Dr. Harrison had written that he was dissident about criticising a product that was intended to appeal solely to the medical man, who should be in a position to make a critical appraisal of such formulas. He could not say much in favour of those formulas. He said, "There is little to be said in favour of

this product. Neo-Passiorine seems to be of a particularly unscientific formula." It was of doubtful therapeutic value. The formulas represented a by-gone age in therapeutics, which unfortunately lingered on in a number of Continental formularies.

Mr. Harvey went on: You submitted to the manufacturers certain observations on the leaflet pointing out that there was a certain vagueness of the phraseology, and alterations were made. That product went on the list. You did not suggest to the manufacturers that it should be withdrawn because it was obsolete and of little therapeutic value. MR. MANN stated that one of the committee's problems was that it was often dealing with products that were not obsolete but were becoming obsolete. The committee did not like taking a product off the list unless there were exaggerated claims. "Here you have a product where the active ingredient was becoming obsolete." It is not dangerous.

MR. HARVEY: It is not suggested that it is dangerous—but that it is of no use. Has it ever been suggested to a manufacturer that a preparation should be withdrawn from the list because it is useless?—MR. MANN: Not very often.

MR. HARVEY: The situation is that it is the rarest thing in the world for anyone applying for manufacturer membership to be refused?—MR. MANN: It happens very seldom.

MR. HARVEY: Mr. Green, in his proof [written evidence] has put down seven precise tests that every manufacturer has to satisfy before he is accepted. I want to put it to you that that is nonsense. I am suggesting that there are only two tests: that the applicant is a manufacturer and that his preparation is a medicine. There are not seven tests as Mr. Green has said. You agree that the policy of the Federation is to get as many manufacturer members as possible?—MR. MANN: Provided the products are up to the requisite standard.

Through Standards Committee

MR. HARVEY: What do you say about Aspro? If Aspro applied for membership they would be welcomed with open arms?—MR. MANN: The product would have to go through the standards committee.

MR. HARVEY: It would go through like lightning. — MR. MANN: No. It would have to go to the standards committee and the advertising claims would have to be examined and in my opinion it would not be accepted because of those claims.

MR. HARVEY asked Mr. Mann if he could give any idea of the proportion of preparations on list "A." MR. MANN said that about 25–30 per cent. of C.F. preparations were on list "A." MR. HARVEY suggested that the therapeutic claims of list "A" preparations were not subject to examination. MR. MANN agreed that was true because the literature accompanying those preparations was directed to the medical profession. Later, MR. HARVEY again asked Mr. Mann: You are very anxious that as many manufacturers as possible should be on the list?—MR. MANN: That is so, providing they are prepared to carry

out the responsibilities membership of the Federation entails.

MR. A. ALDINGTON, the next witness, said in reply to MR. ROCHE, that he thought the reason chemists had not appeared very interested in Aspro when it was first marketed in 1925 was that the price of that aspirin was rather excessive: "aspirins are 100 for one shilling now. In those days they were twenty-five for sixpence, whereas Aspro were twenty-seven for 1s. 3d. and are now twenty-seven for 1s. 9d." Questioned about Andrew's liver salt by MR. HARVEY, MR. ALDINGTON agreed that it was the best selling product of its kind.

MR. HARVEY: Do you not think it is sold as it is because the manufacturers think that is the best way to sell it?

MR. ALDINGTON: The manufacturers advertise it a great deal and obviously think the widest distribution is the best.

MR. HARVEY: Do you disapprove of Andrew's liver salts being available to the public in village shops?—MR. ALDINGTON: It is difficult to say "disapprove." I think they should have to get their supplies through pharmacists.

MR. HARVEY: What public interest would be served if Andrew's liver salts were restricted to pharmacists?—MR. ALDINGTON: It would be better because customers could get advice if they wanted it. MR. HARVEY: If C.F. want to confine the sale of Andrew's liver salts, Kruschen salts and Eno's Fruit Salts to chemists, that would inconvenience the public, the only advantage being that they could get advice?—MR. ALDINGTON: That is the advantage.

(*To be continued*)

N.H.S. STATISTICS

In SURREY in 1957-58, pharmaceutical service costs totalled £1,547,989.

In EDINBURGH during 1957-58, a total of 1,399,706 prescriptions was dispensed compared with 1,266,473 in 1956-57.

In HALIFAX, Yorks, during 1957-58, the total cost of pharmaceutical services was £117,132 compared with £118,660 in 1956-57. A total of 488,050 prescriptions was dispensed at an average cost of 68d. each.

COMPANY NEWS

Last year's figures in parentheses

PFIZER, LTD.—Mr. B. J. Page (secretary and controller) and Dr. K. J. Lynes (general works manager), have been appointed directors.

EVANS MEDICAL (SERVICES), LTD.—Mr. R. W. Oxtoby has been appointed director and general manager of the company. Mr. Oxtoby was manager of the Burma Pharmaceutical Industry in Rangoon since its inception and recently returned to Speke, Liverpool, on the completion of his contract.

EUGENE, LTD.—No dividend for 1957, but the board have declared an interim dividend of 5 per cent. on the recently organised capital in respect of 1958. This is the first payment since 1948, when 50 per cent. was paid as an interim and final dividend. A profit of £24,981 was achieved (against a loss of £25,259 for 1956).

ROLLS RAZOR, LTD.—Consideration of the six monthly dividend on the 15 per cent. non-cumulative Preferred Ordinary shares normally paid on October 15, has been deferred until the full trading results for the year to December 31 are available. The last dividend paid was on April 16, 1955.

MILTON ANTISEPTIC LTD.—The formal offer already announced by Vick International, Ltd., to purchase the ordinary shares (C. & D., September 6, p. 232), has now been sent to the shareholders. The directors recommend acceptance.

ARNOLD M. GEE LTD.—Combined trading profit for year to March 31 was £27,046 (£28,141), plus additional National Health Service receipts relative to previous year, nil (£3,527). To tax, £14,668 (£14,546); superannuation, £1,333 (£2,101); depreciation, £633 (£708); off goodwill and leases, £1,020 (same), general reserve, nil (£3,000). Final dividend, 10 per cent., making 20 per cent.; forward, £667 (£993).

WILLOWS FRANCIS, LTD.—With an unchanged final payment of 10 per cent., the Ordinary dividend is cut to 15 per cent. for the year ended June 30 (from 17½ per cent.). Net profits declined to £26,805 from £34,082.—Mr. G. V. Bridges, because of ill-health, has resigned as managing director but retains his seat on the board as consulting director. The board have appointed to succeed him Mr. T. F. C. Shailler, who joins the company after being associated for many years with May & Baker, Ltd.

COOPER McDougall & ROBERTSON, LTD.—The company states that it has sold its holding of £500,000 13 per cent. cumulative Preference shares in Plant Protection Ltd., to Imperial Chemical Industries, Ltd., for £1 million. Under the agreement the proceeds have been used to subscribe for £1 million new 5 per cent. cumulative Preference stock of Imperial Chemical Industries, Ltd. The agreement also provides for maintenance of the income hitherto enjoyed by Cooper McDougall from the Preference shares in Plant Protection.

ALLEN & HANBURY'S, LTD.—A final dividend of 2s. per share on the whole of the Ordinary share capital is recommended (same). Subject to audit, net profit of the group for the year ended June 30 after all charges, including taxation, is £201,723 (£152,775); taxation charge, £236,389 (£193,672). There are taxation adjustment credits of £666 (debit £817) and a surplus on redemption of debentures of £2,427 (£2,189). After minority interest, £1,390 (£1,700) there is a net profit attributable to group of £200,333 (£150,148) after £927 pre-acquisition profits and writing £169 off preliminary expenses. The parent company's profit, after taxation, is £153,886 (£111,347).

GLAXO LABORATORIES, LTD.—Subject to audit, the profits of the group for the year ended June 30 amount to £2,610,566 (£1,838,000) after providing for all charges including £3,148,000 (£2,332,000) for taxation. Outside shareholders participate to the extent of £62,000 (£26,000) in those profits whilst

£168,000 (nil) is attributable to the pre-acquisition profits of Allen & Hanbury's, Ltd. Group profits include revenue of previous years £136,000 (£88,000). The directors propose (a) to place to: Capital reserve, general (including obsolescence and replacement), £1,500,000 (£1 million); revenue reserve, general, nil (£250,000) and (b) to recommend a final dividend of 11½ per cent. on the Ordinary stock making 17½ per cent. for the year (compared with 12½ per cent.). The final dividend requires £356,356 (£206,056) after income tax, leaving £545,232 (£569,781) to be carried forward. The directors also announce that it is proposed to capitalise £2,755,350 of the reserves of the company (£2,014,650) from the share premium account, arising on the acquisition of the ordinary shares of Allen & Hanbury's, Ltd., and the balance of £740,700 from the general capital reserve, and to issue to the ordinary stockholders one share of 10s. for every two 10s. units of stock now held by them. The purpose of this issue is to bring the nominal capital into closer relationship with the capital actually employed in the business. The difficult trading conditions referred to in the interim report (C. & D., April 5, p. 362) continue.

BUSINESS CHANGES

MR. MICHAEL P. McVEIGH, B.A.(Lond.), M.P.S.I., D.Opt.(A.O.I.), has opened a pharmacy and sight-testing rooms in Pettigo, co. Donegal.

LEITH PROVIDENT SOCIETY, LTD., have extended and modernised the premises of their pharmaceutical department at Taylor Gardens, Leith.

MIDLAND SILICONES, LTD., are moving their head office and London area sales office to 68 Knightsbridge, London, S.W.1 (telephone: Knightsbridge 7801) on October 13. The company's other area offices are not affected.

TREATT, BOVILL & CO., LTD., 19 Watling Street, London, E.C.4, having disposed of its interests in Bovill, Matheson & Co., Ltd., Nairobi, have decided to revert to the company's original name: R. C. Treatt & Co., Ltd. The board of directors remains unchanged.

TECHNICON INTERNATIONAL, LTD., New York, announce the formation of a British subsidiary company—Technicon Instruments Co., Ltd., with offices at 26 Warwick Road, London, S.W.5 (telephone: Freemantle 5109) to manufacture and market in the United Kingdom and Commonwealth apparatus for automatic continuous chemical analyses for production control as well as the other Technicon products.

OVERSEAS VISIT

MR. GEORGE WHITE (director, export sales division, Ever Ready Co. (G.B.), Ltd.), is to fly to Africa on October 14 visiting East and South Africa and Southern Rhodesia. Mr. White, who is also a director of the associate company, Eveready (S.A.), Ltd., will attend the annual meeting in Port Elizabeth

on November 4, and expects to return to the United Kingdom towards the end of November.

LEGAL REPORT

Two Years' Probation

APPEARING before Kidderminster magistrates recently on an adjourned charge of demanding additional drugs by means of a forged prescription, a former colonel, Clifford Sidney Webb, 4 Arch Hill Square, Kidderminster, was placed on probation for two years. The chairman said that, although it was a serious offence, the magistrates did not want to add to the defendant's troubles. "We want to see you out of your present difficulties and make a fresh start." Defending solicitor said that, at Worcester the previous day, Webb had been fined £25 and disqualified from driving for eighteen months on a charge of being drunk in charge of a motor car. He had also lost his job and was unemployed. At the orig-

inal hearing, Webb was stated to be a sick man. Referring to a medical report, the probation officer thought it would be proper to interpret it as meaning that defendant's doctor was unable to assist him in getting the better of his illness. It was only fair to say, however, that it did not rule out the possibility of Webb being helped. Webb was ordered to pay 15s. costs.

DEATHS

DAVIES.—On September 13, Mr. Thomas Price Davies, M.P.S., Belvedere, Park Crescent, Llandrindod Wells, aged seventy-three. Mr. Davies was vice-chairman of Radnorshire County Council, a member of the Brecon and Radnor Joint Hospitals Management Committee and had represented Radnorshire on the Welsh Regional Hospital Board as well as many other public bodies. Mr. Davies was chairman of the Radnorshire Executive Council. He had been chairman of the Llandrindod

Wells magistrates for several years, having been a county magistrate since 1939.

PIGGOTT.—On September 23, Mr. Herbert Maxwell Piggott, M.P.S., 274 Ladysmith Road, Enfield, Middlesex. Mr. Piggott qualified in 1935.

STOPES.—On October 2, Dr. Marie Stopes, Norbury Park, Dorking, Surrey, aged seventy-eight. Dr. Stopes was a doctor of science and of philosophy and a fellow of University College, London, and was the first woman to be appointed to the science staff of Manchester University. An outspoken believer in birth control, she wrote many books on the subject.

WILLIAMS.—On September 29, Mr. George Wynne Williams, M.P.S., The Pharmacy, Queen Square, Dolgellau, Merioneths, aged seventy-eight. Mr. Williams who was one of the oldest practising chemists in Wales, was a member of the Merioneth Executive Council.

RESTRICTIVE PRACTICES COURT MEMBERS

The chairman and his six colleagues at the C.F. hearing



Mr. Justice Devlin



Mr. Justice Upjohn



Lord Cameron



Sir Godfrey Mitchell



Sir Stanford Cooper

THE Restrictive Practices Court now hearing the case of the Chemists Federation (p. 384) comprises seven members, two of them High Court Judges, one a Senator of the College of Justice in Scotland and four lay members.

MR. JUSTICE DEVLIN (Sir Patrick Arthur Devlin) has been a Justice of the High Court (Queen's Bench Division) since 1948, and Master of the Bench of Gray's Inn since 1947. He was called to the Bar in 1929, and became a King's Counsel in 1945. He was private secretary to the Attorney-General, 1930-31, and prosecuting counsel to the Royal Mint, 1931-39. In 1940-42 he was in the legal department of the Ministry of Supply, and from then until 1945 junior counsel to the Ministries of War, Transport, Food and Supply. In 1947-48 he became Attorney-General of the Duchy of Cornwall, and in 1955-56 was chairman of the committee of inquiry into the dock-labour scheme. Knighted in 1948, he was made President of the Restrictive Practices Court in 1956.

MR. JUSTICE UPJOHN (Sir Gerald Upjohn) is a Bencher of Lincoln's Inn. He was called to the Bar in 1929, took silk in 1943 and has been a judge of the Chancery Division of the High Court since 1951. He was Attorney-General to the Duchy of Lancaster, 1947-51, and Deputy Chairman of the

Board of Referees, 1946-51. From 1947 to 1951 he was a member of the panel of chairmen of tribunal under the Coal Industry Nationalisation Act, and from 1946 to 1951 treasurer of the General Council of the Bar. He has also served as chief legal adviser to the Allied Control Commission.

LORD CAMERON, D.Sc., F.R.S.E., LL.D., is a Lord of Session. A Scottish advocate since 1924, was Advocate Depute, 1929-36, and became a King's Counsel in 1936. In 1945 he was Sheriff of Inverness, Elgin and Nairn and from 1946 to 1948 of Inverness, Moray, Nairn and Ross and Cromarty. He was Dean of the Faculty of Advocates, 1948-55, and has been since 1955 a Senator of the College of Justice in Scotland. He was knighted in 1954.

SIR GODFREY WAY MITCHELL is the chairman of the engineering and contracting organisation of George Wimpey & Co., Ltd., and of Mono Containers, Ltd. He was knighted in 1948. Sir Godfrey is a part-time member of the Court.

SIR HAROLD STANFORD COOPER, F.C.A., is a former vice-chairman of the Ford Motor Co., Ltd., with which company he was associated for thirty-eight years. During that time he held the offices of secretary, managing director and vice-chairman. He has

been chairman of the associated Ford companies in Europe. In 1941-42 he was a member of the Scott committee on land utilisation in rural areas. He is governor of the British Society for International Understanding, and a member of the council in England of the Council of Christians and Jews. He is full-time lay member of the Court.

MR. W. L. HEYWOOD, O.B.E., a full-time lay member of the Court, was

formerly a member of the General Council of the Trades Union Congress and secretary of the Dyers', Bleachers' and Textile Workers' Union and of the National Association of Textile Trade Unions. He is fifty-six years of age.

MR. WILLIAM GORDON CAMPBELL, B.A., F.C.A., is a member of the council of the Institute of Chartered Accountants in England and Wales and was formerly a partner in Josolyne, Miles & Co., chartered accountants. He is a full-time member of the Court. His age is sixty-five.



Mr. W. L. Heywood

MONOPOLY CHARGES STRENUOUSLY DENIED

U.S. Government accuse producers of antibiotics

AS a result of a legal investigation initiated in November 1957, the United States Federal Trade Commission has filed charges accusing six leading American manufacturers with attempting to monopolise the United States' \$330-million antibiotics industry, and with fixing and maintaining "arbitrary, artificial, non-competitive and rigid" prices.

One of the six (Chas. Pfizer & Co., Brooklyn, New York) is additionally charged with making false and misleading statements to the U.S. Patent Office in order to obtain a patent on tetracycline. Sales of that antibiotic in 1957 totalled more than \$100 millions in value and Messrs. Pfizer and the other five companies which it licensed to sell tetracycline accounted for the whole of those sales.

Charges of conspiracy to fix and maintain prices of the tetracyclines (which include Aureomycin and Terramycin), as well as to deny other drug manufacturers the opportunity to compete in their sale, were lodged against Messrs. Pfizer and the American Cyanamid Co., New York City; Bristol-Myers Co., New York City; Bristol Laboratories, Inc., Syracuse, New York; Olin Mathieson Chemical Corporation, New York City; and the Upjohn Co., Kalamazoo, Michigan.

Joined with Pfizer on a charge of withholding "material and probative" information from the U.S. Patent Office in connection with the tetracycline patent (No. 2,699,054) were the two Bristol firms and Cyanamid. Those three, with Olin Mathieson and Upjohn, were also charged with soliciting and accepting from Pfizer licences to make and sell tetracycline knowing that Pfizer had submitted "false, misleading and incorrect information" to the Patent Office to get its tetracycline patent.

No Real Invention

The complaint further charges that there was no real invention or novelty in the claims for the tetracycline patent, and that the claims "disclosed no patentable invention in view of the prior state of the art" at the time the initial application for it was filed. The complaint said the "alleged invention" was being used and sold in the United States for more than a year prior to the application for the patent, and, furthermore, that the subject of the patent was "obvious, at the time of the filing of the respective applications to anyone having ordinary skill in the art."

After reciting the chronology of early licensing arrangements among Pfizer, the Bristol firms, and Cyanamid for the latter's 1949 patent on Aureomycin, the complaint relates that, on January 11, 1955, Messrs. Pfizer were granted patent No. 2,699,054 on tetracycline. "Under prior arrangements," according to the complaint, Pfizer issued a licence to Cyanamid to make and sell that newly patented antibiotic, and later, in March 1956, similar licences were granted by Pfizer to the Bristol firms and to Olin Mathieson

and Upjohn. Those licensing arrangements are alleged to have had the "purpose and effect of unreasonably foreclosing and preventing competition in the production and sale of tetracycline and chlortetracycline." The complaint also charges the firm with having established and maintained illegal resale price maintenance agreements.

Charges Denied by Firms

All the firms accused have denied the charges and have demanded from the F.T.C. "bills of particular" on which to base their defence. Mr. John E. McKeen (president, Chas. Pfizer & Co.), has said: "Pfizer has never engaged in a conspiracy, never misused its patents, never fixed prices, and wields no monopolistic powers. The charges that Pfizer misled the Patent Office and withheld information are utterly baseless." Mr. Frederic N. Schwartz (president, Bristol-Myers Co., of which Bristol Laboratories is a subsidiary), said that the charges were baseless, and the action would be defended vigorously: the antibiotic industry was highly competitive and prices were fair and reasonable. The average profit on all antibiotics sold in 1957, he said, was less than 1 cent a dose. Some antibiotics sold at wider profit margins than others, but that was necessary to finance the development of new drugs. Mr. W. G. Malcolm (president, American Cyanamid Co.) denied that his company had engaged in any price fixing. Nor had it "employed any unfair method of competition or any unfair or deceptive act or practice in its pricing or its use of patents and licences in its antibiotic business." The wholesale prices of pharmaceuticals, including antibiotics, he said, were lower in 1957 than in 1949, and antibiotics had been almost alone among commodities resisting the upward price trend of recent years. Dr. E. Gifford Upjohn (president, Upjohn Co.) declared that it was the intention of the company to defend its position and prove conclusively that the charges were untrue. Mr. John C. Leppart (senior vice-president in charge of the E. R. Squibb & Sons division of the Olin Mathieson Chemical Corp.) said "We will prove that this complaint is completely untrue and unsupported by any facts."

The filing of the charges is a direct outcome of a two-year economic study of the U.S. antibiotics industry by the U.S. Federal Trade Commission, Washington, D.C., which has published its findings in a volume of 361 pages. The report traces the development of an industry that did not exist in 1941, but whose net sales reached \$344 millions ten years later, whose output then doubled from 1951 to 1956, though lower prices for some products and in new markets kept dollar sales below the 1951 peak. Sales of antibiotics from domestic (U.S.) production were about 40 per cent. of the consolidated 1956 sales of one manufacturer, and 20 per cent. or less for eleven others.

Between 1948 and 1956 the output of penicillin increased six times, and that of the streptomycins almost eight times. The production of antibiotics introduced after late 1948 reached 45 per cent. of the 1956 total. The additional output, the advent of new antibiotics that could be taken orally, and above all the spectacular cost reductions, had set the stage for price reductions. Through competition of the numerous makers of penicillin and of the streptomycins, bulk prices of those products were forced down by more than 99 per cent. from their introductory levels. Only seven companies were still making procaine penicillin in 1956, and five were still making the streptomycins.

The individual producers concentrated their post-1945 research efforts on the discovery of patentable antibiotics that could be marketed as exclusive products possibly insulated against aggressive price competition. At most they were willing, according to the report, to grant licences to those competitors whose parallel research had made them rival applicants for patents covering the same product, or in some instances to partners in research pooling and patent-exchange agreements. During the period 1949-56, twenty-nine new antibiotic products were developed, of which twenty-one were still being produced in 1956.

By 1956 published prices of major manufacturers for one popular injection form of procaine penicillin were the equivalent of 19 cents per gm. (a 94 per cent. reduction from the introductory price in 1948). A dosage form of potassium penicillin tablets was offered at the equivalent of 76 cents per gm. by five major manufacturers, and 27-44 cents per gm. by "packagers" (whose names commanded less recognition among buyers and who bought their penicillin in bulk from the manufacturers). In contrast, the per-gm. price equivalents of various dosage forms of the broad-spectrum antibiotics, of erythromycin and of patented benzathine and phenoxyethyl penicillins ranged from \$1.12 to \$1.51.

Penicillin Production Lost Money

The effects on profits of that price difference between the older and newer antibiotics were indicated by certain financial data submitted by the companies and tabulated under several major product categories. As late as 1951, net operating profit reported was 23 per cent. of sales for the older forms of penicillin, 21 per cent. for streptomycin, and 50 per cent. for the broad-spectrum group. A deficit was shown every year from 1952 through 1956 for the older penicillins, and from 1953 through 1956 for the streptomycins. Broad-spectrum net operating profits, despite rising costs of, and increasing expenditures for, selling, research and management, were reported to be 37 per cent. of sales in 1956, and profits on the new, exclusive penicillin products to be 42 per cent.

NEW PRODUCTS AND PACKS

Diagnostic Gastric Lavage. — The Armour Laboratories (Armour Chemical Industries, Ltd.), Hampden Park, Eastbourne, are marketing a new speciality, Gastrolav lyophilised α -chymotrypsin. The product is used in a procedure for diagnostic gastric lavage described in a 4-p. leaflet issued by the company. The pack is a bottle of twelve 7-mgm. capsules.

Aspirin Modified. — Bengué & Co., Ltd., Mount Pleasant, Alperton, Wembley, Middlesex, have launched a new product, Plus-Prin, a combination of acetylsalicylic acid, glycine, aluminium hydroxide and B vitamins. Plus-Prin is of value for all ailments where aspirin is indicated. The irritant effect of the aspirin is counteracted by the aluminium hydroxide and glycine, and the addition of B vitamins makes the product particularly valuable for the chronic rheumatic patient. The tablets are presented in a cartoned strip-pack of twenty. An outer is available holding twelve cartons.

Antiseptic/Analgesic Lozenges. — Pharmaceutical Specialities (May & Baker), Ltd., Dagenham, announce the introduction of Planidets antiseptic/analgesic lozenges. Each Planidet contains dibromopropamidine embonate, 1 mgm.; chlorphenoctic amsonate, 1 mgm.; and butylaminobenzoate, 4 mgm. Useful, by reason of their local analgesic effect, in relieving the discomfort of a sore throat and in soothing irritated tissues, Planidets are also of service as adjuvant therapy in alleviating irritation in tonsillitis, streptococcal sore throat and Vincent's infection, and may be used either prophylactically and curatively. They are supplied in tube of twelve.

A New Phenothiazine Derivative. — Allen & Hanburys, Ltd., Bethnal Green, London, E.2, announce the introduction of a new phenothiazine derivative, perphenazine, under the brand name Fentazin. Fentazin is stated to be approximately five times as active as chlorpromazine, mgm. for mgm., and to be effective in much smaller doses while virtually free from side-effects. Indications for its use range from anxiety and tension states to severe psychoses. Fentazin is also effective in the control of nausea and vomiting, including "morning sickness." It is offered in two presentations: tablets and injection. The tablets are issued in containers of fifty and 500 in strengths of 2 mgm., 4 mgm., and 8 mgm.; the injection (containing 5 mgm. of perphenazine per c.c.) in container of five 1-c.c. ampoules.

Sun Lamps. — Two manufacturers of sun lamps announce the introduction of new models.

LONDON COMMERCIAL ELECTRICAL STORES, LTD., 22 Cursitor Street, London, E.C.4, have produced in the Soltanette a model with a highly-polished reflector and burner mounted on a wire-design stand. Vertical movement is by means of a plastic screw knob between lamp and stand, and another plastic knob is fitted to the top of the lamp so that, when the lamp is working, the angle may be



The new Soltanette infra-red lamp. London Commercial Electrical Stores, Ltd., 22 Cursitor Street, London, E.C.4.

adjusted without touching any metal. The lamp itself is of highly polished aluminium with green stoved-enamel stand, but is also available with a chromium-plated stand at an additional cost of 5s. The Soltanette may be converted to radiant heat by substituting a mixed-wave 400-watt luminous radiant-heat generator for the long-wave 250-watt dull-emitter infra-red burner. It is suitable for all voltages from 50 to 250 a.c. or d.c. Its size is: reflector diameter, 7½ in.; overall depth, 8 in.; overall height, 14½ in. In anticipation of a forthcoming British Standards Specification requirement, the company have incorporated "cord-grip" cable entries in some lamps and hand-grip plugs and sockets in others. Heavy-gauge chromium-plated wire protection guards are standard on all lamps.

PERIHEL, LTD., 146 New Cavendish Street, London, W.1, have introduced a redesigned version of their Actinea sun-lamp. The new lamp, known as the "super Actinea 59" con-

tains both ultra-violet and infra-red elements in a rounded cream-enamelled case which, when closed, affords full protection to generator and reflector. A redesigned counter-balance system gives full stability to the unit when in use, whatever the angle required, and the rimmed base, in bronze finish, is claimed scratch-proof, allowing the lamp to be positioned on delicate furniture without risk of damage. The weight is 9 lb., and the model, with "double safety" carrying handle, is easily transportable. The infra-red element cannot be touched by hand, and ultra-violet and infra-red may be used separately, a special plug arrangement clearly indicating the radiation by letters and colour.

A New Grade of Orange Oil. — Sun-kist Growers, Ontario, California, U.S.A., are introducing to the British market their "exchange special" (product No. 75) oil of sweet orange, described as an "in-between" grade of oil. It is quoted at \$1·25 per lb., c.i.f. (approximately 9s.), and should be ordered from any of the usual distributors in Britain.

Improved and Re-labelled. — P. C. Products, Ltd., Prospect Works, Allerton, Bradford, have launched a new improved 1001 cleaner with new label.

Aerosol Hair-setting Lotion. — Fassett & Johnson, Ltd., 86 Clerkenwell Road, London, E.C.1, announce the launching in Great Britain of a new Nestle product, Soft Spraze, an aerosol hair-setting lotion containing no lacquer.

Lipstick and Nail Novelties. — Available during October from Crystal Products, Ltd., Hook Rise, Kingston By-pass, Surbiton, Surrey, Outdoor Girl "Nail Magic," described as "a sparkling nail colour in fresh-as-paint bottle with distinctive shape," is available in shades forming a new range to harmonise with Outdoor Girl lipstick colours. They are "Clear," "Natural Touch," "Soft Touch," "Pink Touch," "Touch of Rose," "Peach Touch," "Touch of Coral," and "Bright Touch." "Gold Touch," "Sungold Touch" and "Silver Touch" are available in an identical bottle but "with gleaming cap and crystal plume." The Outdoor Girl *de luxe* lipstick is in a gilt case with black "hair-pin-bend" tracing. A new colour in the lipstick range is "Rave Red," a vivid red "with a luminous undertone of pink."



MATCHING FANTASIES: Nail varnish and eye-shadow have both been produced in the "fantasy" colours introduced by Gala of London, Ltd., Hook Rise, Kingston By-pass, Surbiton, Surrey (see C. & D., September 20, p. 294) to match current fashion colours.

TRADE NOTES

Withdrawn.—British Schering, Ltd., 229 Kensington High Street, London, W.8, announce the withdrawal from their range of the 250-tablet pack of Orasecron.

Handkerchiefs With Nasal Spray.—Scott & Turner, Ltd., Andrews House, Newcastle-on-Tyne, 1, announce the issue of a pocket pack of tissue hand-



kerchiefs with every Zeph nasal spray at no extra cost. The offer is intended to facilitate the correct use of the spray, so that the maximum benefit may be obtained from it, and applies to all orders received before December 15. A display carton contains one doz. of the combined packs.

Sole Trade Distributors.—Thomas Blake & Co., 57 Park Terrace East, Horsham, Sussex, have been appointed sole trade distributors for Garlisol and Salubria products.

Reduced Prices.—Smith & Nephew, Ltd., Bessemer Road, Welwyn Garden City, Herts, announce that the new reduced prices of Blue Velvet hand lotion and Nivea creme soap take effect on November 3 and not on October 15 as originally announced.

Change of Distribution.—Rosedale Products, Ltd., Rosedale Works, Birkbeck Road, London, E.8, announce that the distribution of their Lano-spray hair-set and Lano-spray with lacquer is now being handled by Thomas Christy & Co., Ltd., Aldershot, Hants.

Stocktaking.—E. R. Squibb & Sons, Ltd., 17 Old Bond Street, London, W.1, announce that their offices at Speke, Liverpool, 24, are being closed to normal trading from Monday, October 27, until Thursday morning, October 29, as all departments will be engaged on stocktaking.

A New Size.—The Armour Laboratories (Armour Chemical Industries, Ltd.), Hampden Park, Eastbourne, Sussex, announce the introduction of a 5-gm. presentation of Tryptar ointment: in a tube specially designed with an elongated nozzle for ease of application in otitis externa.

An Advertisement Corrected.—The retail price of the 1-oz. bottle of Tympalgin ear drops, the subject of an announcement in last week's issue by the manufacturers, Silten, Ltd., Hatfield, Herts, is 3s. 5d. (including purchase tax) and not as there stated. The price of the tax-free dispensing pack was correctly given.

Poisons Register.—Thomas Wajde & Sons, Ltd., Kirkstall Hill, Leeds, 5,

have issued a new edition of their "Register of the Sale of Poisons." Bound in stiff board covers, the book has a page size of 8 x 5 in. and provides space for entering the details of well over 500 sales. The introduction includes a concise summary of the law covering the sale of Schedule 1 poisons and a complete list of those poisons, annotated to indicate those which are also Schedule 4 and those which are exempted from Schedule 1 in certain circumstances. The price of the book includes six certificate forms for the purchase of poisons. (Certificates are also available separately in books of fifty.)

Luxury Hot-water Bottles.—The Mandelle Quilted hot-water bottle, covered in quilted satin (in pastel colours of beige, pink, blue, gold, green and lavender) and the Mandelle Velour (in blue, beige, lavender, coral, green and gold) are two "luxury" models in the range marketed by J. Mandleberg & Co. (Rubber), Ltd., Salford 6, Lancs.

Bonus Offers

FASSETT & JOHNSON, LTD., 86 Clerkwell Road, London, E.C.1. Nestle liquid creme Colorinse. Twelve invoiced as eleven, on order for two doz. or more. Until October 31.

PHARMACEUTICAL SPECIALITIES (MAY & BAKER), LTD., Dagenham. Planidets. Thirteen invoiced as twelve.

Calls for Tenders

THE Board of Trade has issued details concerning tenders sought by various overseas bodies, and an outline is given below of the requirements and closing dates. For fuller information readers should apply, quoting reference, to Export Services Branch, Lacon House, Theobalds Road, London, W.C.1.

Isoniazid, sodium PAS and calcium PAS tablets. Central Trust of China. Purchasing Department, 68 Yen Ping Nan Road, Taipei, Taiwan, Formosa. (E.S.B. 23278/58/I.C.A., October 21.)

INFORMATION WANTED

The Editor would appreciate information about:

COWLINE



CHIROPODY FOR RACING WALKERS: In the London to Brighton walking race on September 14, Scholl Manufacturing Co., Ltd., 182 St. John Street, London, E.C.1, presented a silver cup to the winner (D. J. Thompson) and also provided a mobile chiropody unit for all the walkers. From seven in the morning to seven at night, a chiropodist from the company's Brighton branch was kept hard at work tending to the feet of the walkers. The presentation of the cup was made by Mr. William Scholl (a director).

MANUFACTURERS' ACTIVITIES

Removal Planned.—During the next two years County Laboratories, Ltd., are establishing a £750,000 factory on the Cox Green industrial estate at the Maidenhead trunk road by-pass site. The factory will cover about two-thirds of the ten-acre site, and will employ about 750 people. A control laboratory, work study unit, and buying department are being provided.

Paper Towels in Matto Grosso.—British Patent Perforated Paper Co. (manufacturers of Bronco toilet tissues), who provided a year's supply of Onliwon paper towels for members of the Oxford and Cambridge Expedition to South America, state that the towels are proving invaluable. The team is exploring the Matto Grosso, the region in which Colonel Fawcett met his death. Its six members have spent twelve months in making an extensive collection of botanical specimens in the region.

Correspondence

Letters when received must bear the name and address of the sender, not necessarily for publication. The Editor does not hold himself responsible for the views expressed.

Barter

SIR.—The following advertisement appeared in a Sunday paper last week:

LEIGH-ON-SEA. Exchange pharmacy with house: for house only. London, Box T.347.

What is pharmacy coming to? Shall we see pharmacies advertised in exchange for a car or anything useful?

LEONARD HIGGS,
Thames Ditton

Such is Fame

SIR.—A customer walked into the shop and asked me the other day for a tube of shaving cream, but could not remember the name. He said it had the same name as a film star. After going through most of them I mentioned Ingram's, and he said yes, that was the one he wanted. I asked him the connection with the film star, and he was most indignant that I had not heard of Ingram Bergmann.

STAR-SPANGLED

Dispensing Leeches

SIR.—I was most amused to read in your feature "Onward from Galen" on October 4 the comment "There must be numerous living pharmacists who have dispensed them (leeches) to hospitals . . ." suggesting that anyone who has done so is in his dotage. I am still on the sunny side of fifty and when I was in retail pharmacy in the West End of London in the nineteen-thirties I must have dispensed dozens and dozens of leeches, mainly for a nursing home which specialised in eye operations. The container was a tall 2-oz. earthenware ointment jar with the celluloid lid replaced by gauze held firmly with a rubber band. The word firmly should be emphasised as the leeches were active little fellows and would take advantage of the smallest loophole in order to gain their liberty.

S. A. MOBBS,
South Benfleet, Essex

Christmas Buying

SIR.—Mr. Stanley Bubb (*C. & D.*, September 27, p. 336) rightly calls our attention to the "grievous losses to retailers" occasioned by a sudden drop in purchase tax rate, but appears to overlook one important fact. Neither the Government nor the manufacturers ask or expect us to sell stock purchased at the old rate of tax at a loss. It is perfectly legitimate for all stock to be sold at a price which includes the tax paid, and any reduction to the new rate of tax-inclusive price is quite a matter for the retailer to decide. Within twenty-four hours of the last reduction, every branch of a firm of multiple chemists announced "All goods offered at the new rate of tax." That was, of course, a huge and expensive advertisement, despite the fact that the chairman of the company concerned tried to pass the blame (for the "loss" of £300,000) on to H.M. Government. The little man, seeing his big-business competi-

tor's price-cutting, just had to follow suit! If everyone waited one month before reducing prices, those "grievous losses" would be considerably reduced.

C. H. PATRICK,
Twyford, Berks

Specific and Polypharmacy

SIR.—Xrayser, in his Topical Reflections on the second professional session of the Llandudno meeting of the British Pharmaceutical Conference (*C & D.*, October 4, p. 357) has gathered impressions from my paper which I think are unwarranted. It was, of course, implicit in the charge given to me that I should deal in particular with procedures of dispensing the medical speciality and, in the circumstances, and because of space and time restrictions, I forbore from taking up the specific non-speciality medicinal. It must certainly be admitted that there are specific drugs which are "non-proprietary." Xrayser may, however,

fairly be asked to name the specific drugs of the British Pharmacopœia which were never non-proprietary, and by contrast, to indicate the ratio between them and the specific drugs of the Pharmacopœia which originated from the research of the pharmaceutical industry throughout the world. On the issue of polypharmacy, I assume that Xrayser would, on occasion, permit me to have my tongue in my cheek as he appears himself to have had in this instance with his learned and classical reference to the sixth Mithridates.

A. CHAMINGS,
Horsham, Sussex

Appreciated

I SHALL be much obliged if you will send me three sets of your colour wall charts of the different tablets and capsules. I was delighted to see that such a record was available, since the identification of tablets and capsules is a constant nightmare.—A.C.A.

PHARMACEUTICAL SOCIETY OF NORTHERN IRELAND

Monthly meeting of Council

M R. C. E. MCILHAGGER (president) was in the chair at the monthly meeting of the Council of the Pharmaceutical Society of Northern Ireland held in Belfast on September 25. Also present were Professor E. B. C. Mayrs, Messrs. W. C. Tate, H. F. Moore, F. R. Moore, C. A. Quinn, W. S. Hall, R. Gibson, H. G. Campbell, W. P. Ewart, S. E. Campbell, A. Templeton, W. J. Thornton, D. Moore, R. M. Watson, J. Gordon, J. Kerr, J. Caldwell, H. W. Gamble, W. H. Boyd, P. R. W. Shinner, Dr. R. G. R. Bacon and Mr. W. Gorman (secretary). An apology for absence was received from Dr. H. J. Cronholm.

The minutes of the July meeting were adopted on the motion of MR. J. CALDWELL, seconded by MR. TATE. The Council, on the recommendation of the Education Committee, agreed to the registration of the following as students: R. C. Macaulay, Belfast; D. A. O'Boyle, Belfast; D. L. Ogle, Belfast; G. M. Murray, Belfast; D. O'Kelly, Londonderry; W. M. I. McKay, Magherafelt; Anne E. Thompson, Belfast; W. H. Thompson, Strabane; Eleanor E. Smyth, Ballymoney.

Mr. Gorman reported that a letter had been received from the convenor of the third Pakistan Pharmaceutical Conference, Karachi, November 28 to December 2. It was agreed to send the Council's good wishes for a successful conference. A letter was also submitted from the secretary of the Associates' Section of Ulster Chemists' Association requesting the use of the Society's main hall on November 6 for the section's annual meeting. The request was granted on the motion of MR. BOYD, seconded by MR. GIBSON.

Tributes to Professor Mayrs

The Council received a letter from the secretary of Queen's University, Belfast, informing them that the University's representatives on the Council for the next three years would be Professor O. L. Wade and Dr. R. G. R. Bacon. The letter explained that Professor Mayrs had now retired from the chair of pharmacology at the University. THE PRESIDENT said that it would be a pleasure to welcome Professor Wade whom most Council members met during the 1957 series of lectures. They were also glad that Dr. Bacon would continue as a University representative. At the same time the Council deeply regretted the retirement of Professor Mayrs. Mr. McIlhagger thought it was their wish that they should place on record their sincere appre-

ciation of the wonderful services contributed by Professor Mayrs over his years of membership. He thought they should record their appreciation in the minutes.

MR. W. H. BOYD said the Council members always appreciated the observations made by Professor Mayrs, who had been an asset to the Council's committees. He was pleased to see that Dr. Bacon was retaining his membership of the Council. MR. S. E. CAMPBELL said he would also like to say how much they regretted the departure of Professor Mayrs from the Council. They would miss his very wise counsel. MR. P. R. W. SHINNER said it was greatly regretted by all that the Professor had severed his connection with the Council. His work had always been of the greatest worth and it was a privilege for members to serve on the same committees as the Professor. Professor Mayrs had been instrumental in solving many of the difficult problems that came before the Council, particularly in the Law and Education Committees. MR. H. W. GAMBLE said that on Government deputations in which pharmacists mainly were concerned, Professor Mayrs had carried a lot of weight and had been most helpful.

Replying, PROFESSOR MAYRS said he was sorry to leave the Council and he was grateful to all the members for the courtesy they had shown him.

The Ministry of Home Affairs, in a letter to the Council, stated that under the Pharmacy and Poisons Act, 1925, the Minister had fixed the number of druggists' representatives on the Council at one. The Minister nominated Mr. F. R. Moore, J.P., to represent the wholesale drug trade for a further period of three years. MR. MCILHAGGER said that the notification gave the Council great pleasure.

An application for restoration to the register was received from Mr. Bernard O'Reilly, Holdsworth Chemists', Ltd., Northern Rhodesia. The request was granted on the motion of MR. EWART, seconded by MR. H. G. CAMPBELL.

Presenting the report of the Education Committee, MR. J. KERR said that Mr. D. Moore's proposal at a recent Council meeting that a series of lectures on business methods should be held during the coming winter had been discussed by the Committee. The Committee thought that such a series might fail from lack of interest and it was thought that something on the lines of the lectures of last winter might be more successful. The Committee agreed to ask the president and secretary to arrange for a series of lectures.

The Committee also agreed to recommend that the Council should inform the board of examiners for the Final Part I examination that a candidate should pass the examination in biology if he had obtained a total of 200 marks or more in theoretical and practical botany and zoology, provided that the candidates had not, in any of those four parts, obtained less than forty marks. On the question of preparing a list of recommended books it was agreed to consult the examiners in December and to ask for their assistance. MR. KERR said the Committee also recommended that the relative parts of a report on a meeting with teachers at the College of Technology should be brought to the notice of the examiners concerned.

Examination Change Suggested

The Committee recommended also that, as in Britain, students for the Final Part II examination, under the new regulations, should be allowed to sit the examination in some subjects at the end of the first year of the course and should not be required to take all subjects together at the end of the course. It had also been recommended that the Final Part I examination under the old regulations should not be held after June 1960. The Committee had also agreed that, in view of the reaction of the students to the course for the Institute of Management qualification, the particular department at the College should be approached with a view to the provision of a more realistic course.

MR. BOYD suggested that, in view of the amount of detail involved, the Council should accept the report of the Education Committee as a report only and not as a recommendation. Members could not, he thought, make up their minds immediately—they would have to study the matters involved. MR. H. W. GAMBLE, agreeing, said that it might be possible for the secretary to enlarge on the recommendations and enable members to study them in time for the next meeting of Council. He thought the Council should have more detail. Some of the matters required a great deal of thought.

On the proposition of MR. KERR, seconded by MR. BOYD, the Council accepted the recommendations of the Committee on the organising of a course of lectures, the question of the examinations on botany and zoology and the question of preparing a list of recommended books. The remainder of the Education Committee's proposals were accepted as a "progress report."

The report of the Finance Committee was adopted on the motion of MR. J. CALDWELL, seconded by MR. W. S. HALL. The Council agreed to affix the seal of the Society to the certificates of qualification of James Leonard Groves, Eileen Jones, David McMeekin and Marguerite Joan Patton.

It was decided to refer the report of the board of examiners on the June 1958 examinations to the Education Committee. MR. QUINN commented that it was pleasing to note that the reports were more encouraging than usual. They seemed to show that there was a general improvement in all subjects.

The financial report which showed a deficit of £258 on the year's working was accepted by the Council on the motion of MR. WATSON, seconded by MR. QUINN. The Council agreed to hold the Society's annual meeting in the Society's house on October 6.

A report on the British Pharmaceutical Conference was given by MR. H. W. GAMBLE, who said it had been most successful. He proposed that the Council should send a letter of appreciation to the Conference local committee for their excellent work. MR. BOYD, seconding, hoped that many of the younger members of Council would visit the Conference next year. THE PRESIDENT also expressed appreciation of the work of the local committee. He thought the Council should also keep in mind the possibility of "bringing the conference back to Belfast" at some time in the future.

Dealing with the winter programme, it was reported that

Professor Wade was being approached in connection with a series of lectures similar to those of last year and that a number of president's "at homes" had been arranged. THE PRESIDENT said that the subjects chosen would be of interest to all pharmacists. The first would be on October 20 when Dr. H. Morgan (Department of Industrial and Forensic Science) would speak on "Science in the Detection of Crime." Later lectures would include "The Pharmacist and Common Law" by Mr. C. C. Stephens; a series of films at a January "at home," a lecture on "Tranquillisers" by C. R. Day. Dr. Harold Davis (chief pharmacist, Ministry of Health in Britain) would speak in March on a date to be arranged.

MR. GORMAN reported that at the last Council meeting a report had been received from the board of examiners in which it was recommended that a student should make application to them in December to sit for a fourth and final attempt at Part I, having already made three attempts at the examination. The matter had been referred to a small subcommittee to interview the student. Also interviewed was another student who had made three attempts and on whom the examiners made no recommendation. The latter student had written asking permission to make a fourth and final attempt. The deputation, which had been given full powers to make a decision, heard the views of the two students and came to the conclusion that it would be best to allow both students a fourth and final attempt at the Part I examination. The students had since been informed of that decision. The Council approved the action taken.

The secretary reported that he had received £5 5s. from the Northern Ireland Optical Society for the Northern Ireland Chemists' Benevolent Fund.

The Council considered a letter from a student who was registered under the new regulations and who sat for his Part I examination for the first time in June 1957 and was referred in one subject. He later passed in December 1957 and commenced his apprenticeship. The student stated that under the present regulations he believed that he could not start his Part II classes until he had completed two years' apprenticeship—in that case, December 1959. Because classes started in September he would not be able to start until September 1960, and he asked if it would be possible to start in September 1959 although he would be fourteen weeks' short of his two-year period. It was agreed to refer the matter to the Education Committee for a report.

A PHARMACIST'S ANTHOLOGY **CALF'S FEET JELLY**

From *Lark Rise to Candleford*, by Flora Thompson
IN those days, if any one in a village was ill, it was the custom for the neighbours to send them little dainties. Even Laura's mother, out of her poverty, would send a little of anything she thought a sick neighbour might fancy. Miss Lane, who had ten times the resources of Laura's mother, did things in style. In cases of sickness, as soon as she heard the patient had "turned the corner," she would kill or buy and have cooked a fowl. . . . Zillah could be trusted to cook the chicken, but, once, when one of Miss Lane's own friends fell ill, she herself brought out from somewhere a cooking apron of fine white linen and, with her own hands, made him a wine jelly. The history of that jelly was far removed from those that we now buy in bottles from the grocer. To begin with, calf's feet were procured and simmered for the better part of a day to extract the nourishment. Then the contents of the stewpan were strained and the stock had another long boiling in order to render it down to the desired strength and quality. Then more straining and sweetening and lacing with port, sufficient to colour it a deep ruby, and clearing with eggshells, and straining and straining. Then it was poured into a flannel jellybag, the shape of a fool's cap, which had to hang from a hook in the larder ceiling all night to let its contents ooze through into the vessel placed beneath, without squeezing, and when, at last, all the complicated processes were completed, it was poured into a small mould, and allowed yet one more night in which to set. No gelatine was used.

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TELEGRAMS: "CHEMICUS ESTRAND, LONDON"

Cost of Treating Anæmia

IN comments upon the current treatments of iron-deficiency anæmias, Davidson and Richmond (*Lancet*, 1958, ii, 570) provide a table showing the cost of oral iron preparations. The figures are dissected into basic price, purchase tax (if any), chemists' allowance for dispensing prescription, cost to National Health Service of a prescription for 100 tablets, and cost to patient of 100 tablets if purchased in the pharmacy. A further table analyses Scottish prescriptions for iron preparations dispensed in May 1957. The figure given for total number of N.H.S. prescriptions dispensed was 1,689,505, of which 2.19 per cent. were for oral iron prescriptions. Prescriptions for ferrous sulphate, gluconate and succinate in the sample (10,495) showed an average of 88.9 tablets per prescription. The ratio of ferrous sulphate prescriptions to those for ferrous gluconate plus ferrous succinate was 1:3; and of non-proprietary preparations to proprietary preparations 1:2. The authors name ferrous sulphate tablets (proprietary or non-proprietary) as the least costly form of iron at present available for oral medication and they consider ferrous sulphate to be clinically as effective as other preparations of iron and not more liable to cause side-effects. Were ferrous sulphate always prescribed in preference to other iron preparations the Scottish N.H.S., they estimate, would save around £1,800 annually in hospitals, and £3,250 monthly in the general practitioner service. Total estimated saving would be, in Scotland, £40,000 per annum. In any such calculations everything depends on whether the assumptions of relative therapeutic value of different preparations are correct. On that we can have no opinion, but we expect some counterblast from prescribers who see advantage in the gluconate and succinate method.

Pollution and its Prevention

MANY an industrialist of the Victorian era was in the habit of maintaining that "where there's muck, there's money." Since those days standards of social responsibility have risen, but the range and volume of toxic and offensive effluents have also increased. Processes inevitably yield useless by-products, some of which raise problems. There are, for example, the all-but-insoluble resins; the bacteria-laden wastes capable of disseminating infection; and the gases with offensive odours. For water-insoluble waste products disposal in deep pits is often an easy and effective method, but all types have

to be provided for, and rivers, streams and canals adjacent to factories may, despite all precautions, receive toxic substances from otherwise innocuous effluents. The unsightly smoke stack of heavy industry permits the release of fumes and gases in the atmosphere at what may be a sufficient dilution, but trapping devices require improvement, and the conveyance of fumes may involve costly installations between the process and the stack.

The problems of pollution have become more urgent of solution through the coming into force of the Clean Air Act, and the necessity of securing permission from river boards for the disposal of effluents. Detergents have, almost without exception, defied existing apparatus for the processing of sewage. Only one (Lipassol) has, on the evidence of tests demonstrated at the recent pollution conference, shown no inhibition of plant growth at a concentration of 20 parts per million. The remainder, at concentrations of only 1 or 2 p.p.m., have demonstrated a considerable toxicity to plant life. The necessity, therefore, for care in the disposal of noxious material is one which, while it is now universally recognised, is liable to be always presenting new technical problems. It is the function of conferences such as that recorded on page 400 to focus attention on those technical aspects.

Onward from Galen

A CURRENT CAUSERIE

COURT 7 at the Law Courts on the morning of October 6 was full almost to overflowing when, within three minutes of the notified time of commencing, the proceedings opened in the first case to come before the Restrictive Practices Court. One row of seats was almost entirely taken up by a C.F. contingent that included the secretary of the Federation (Mr. R. H. Kemp), the assistant secretary of the National Pharmaceutical Union (Mr. J. Wright) and the chairman of the Federation's Propaganda Committee (Mr. Allen Aldington), augmented by the registrar of the Pharmaceutical Society (Mr. F. W. Adams). Mr. C. Green, the Federation's assistant secretary, was in the well of the court. Among other trade figures to be seen, then or at later stages of the first day's hearing were Mr. S. W. Day and Mr. W. G. Hollis (secretary, Proprietary Association of Great Britain) and Mr. W. K. Fitch (publications manager of the Pharmaceutical Society). It is believed that a number of anti-C.F. or at least non-C.F. manufacturers were represented on the "public" benches. As though to ensure an enlightened decision by the Court an official tested in turn each of the seven lamps on the bench, and there was some speculation among some of those waiting whether the president and other legal members of the tribunal would appear in wig and gown. In the event they did not, perhaps so as not to create a class distinction between them and the other members of the panel, and the only wigs and gowns were those of counsel, clerk and usher (whose "Silence!" had split-second effect). The fact that an announcement was made during the day that a special cupboard had been set aside for the books and papers of the contestants seemed to presage a long hearing.



ONE of the most eminent apothecaries in Paris during the reign of Louis XIV was Mathieu François Geoffroy, who died 250 years ago (on October 26, 1708). His pharmacy was the meeting-place of learned men from many countries. In 1690 Geoffroy was asked to prepare for Madame la Dauphine "quinquina extract" in the form of small gilt pills, and he also appears to have functioned as public analyst. His fame, however, is eclipsed by that of his elder son, Etienne François Geoffroy.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN

LONDON EVENING MEETINGS RESUMED

Conference proceedings to be given a special supplement of *Journal of Pharmacy*

THE titles of the first three of a new series of London evening meetings were announced at a meeting of the Council of the Pharmaceutical Society on September 30 and October 1. Provisionally arranged by the Establishment and Organisation Committee for the period to the end of the year, they are "Pharmaceutical Research in the United States," by Dr. A. H. Beckett; "Gas Chromatography in Pharmaceutical Analysis," by Mr. L. Brealey; and "Recent Advances in Packaging Pharmaceutical Products," by Mr. J. Anderson. The new meetings, arranged to take the place of the evening meetings discontinued two years ago, are designed to appeal primarily to audiences with special interests rather than to the membership at large. All three are scientific meetings, but future arrangements under the new policy may include professional, historical or other appropriate subjects.

Proceedings of the Conference

The Publications Committee reported that it had approved a proposal by the Editor of the *Journal of Pharmacy and Pharmacology* that the papers read at the British Pharmaceutical Conference meeting in Llandudno, with reports of the discussions, should be published as a supplement to that journal to be described as "Proceedings of the British Pharmaceutical Conference." The supplement would probably be published in December.

The Council approved a recommendation of the Establishment and Organisation Committee embodying suggested subjects—for submission to the Conference Executive—for the Professional and Symposium Sessions at the Bournemouth meeting of the Conference in 1959.

It was reported that, at the recent meetings of the International Pharmaceutical Federation in Brussels, the Press and documentation and scientific sections had considered the question of making available an abstract service of papers published in pharmaceutical periodicals, and had decided to set up a small committee to report on that proposition to the next Congress.

The Council also approved recommendations by the Education Committee that the Thomas Chase prize for 1958 should be awarded to Miss M. Bowles, Pennant Grove, Selly Oak, Birmingham; and the Umney Memorial prize for 1958 to Miss Sylvia Goldsborough Rowley, Woodthorpe, Nottingham. The Council rescinded a resolution passed at its June meeting awarding the Petrie Trust Bursary to Mr. A. Johnston, Aberdeen, who had been named in error and passed a resolution awarding the Bursary to Mr. A. T. Johnston, The Smithy, Fintray, Dyce, Aberdeens.

Examination Reports

Reports received of the examinations held in July 1958 showed that, in the Intermediate examination in Scotland, out of 166 first entries eighty-six passed, twenty-nine were referred, forty-nine failed, and two were absent. Of fifteen re-entries, three passed, five were referred, six failed, and one was absent. Ten candidates sat for a referred subject only, and seven passed, three being again referred.

In the Pharmaceutical Chemist Qualifying examination held in England and Wales, there were 251 first entries, of whom 133 passed, fifty-four were referred in one subject and thirty in two subjects, and thirty-four failed. Of twenty-four re-entries, three passed, two were referred in two subjects, fifteen failed, and four were absent. Forty candidates entered for one referred subject, of whom thirty-two passed, six being again referred and two being absent. Of thirty-eight candidates sitting for two referred subjects, twenty-one passed, seventeen being again referred in both subjects.

In forensic pharmacy only (Regulation 28) there were twenty-three entrants, of whom twenty-one passed and two were referred.

In the Pharmaceutical Chemist Qualifying examination held in Scotland there were 303 first entries, of whom 120 passed, seventy-three were referred in one subject and forty-four in two subjects, sixty-three failed, and three were absent. Of thirty-six re-entries two passed, six were referred in one subject and four in two subjects, eighteen failed, and six were absent. Of twenty-nine entrants for a referred subject twenty-two passed, seven being again referred, and of thirty-nine entrants for two referred subjects twenty passed, seventeen being again referred in both subjects and two being absent. One candidate sat for forensic pharmacy only (Regulation 28) and passed. In July there were three candidates at the Entrance examination. Two sat for the three subjects and passed in biology and physics; the other sat for one subject only, and passed.

Benevolent Fund

The report of the Benevolent Fund Committee showed that grants amounting to £348 had been made to seven widows and three members. Recommendations for grants amounting to £182 in two other cases were approved. Three applications for assistance were deferred. From the Orphan Fund a grant of £31 18s. was reported, and the Council approved recommendations for grants amounting to £253 in three other cases. Two grants amounting to £85 were made from the War Aid Fund. The Benevolent Fund quarterly report showed that, in the September quarter, sixteen grants amounting to £984 were made, against twenty-seven grants and £1,003 in the September quarter of 1957.

The Committee received a report on the annual review of the circumstances of annuitants, and agreed to a special grant of £12 10s. to one. A legacy of £10 to the Fund was reported received from the late Mr. W. T. Robinson, Worthing.

A summerhouse presented to Birdsgrove House by the Bristol Branch in memory of the late Miss E. E. Parry was reported delivered and much appreciated by convalescents. Other gifts were a projector and screen for slides and scripts (from Hendon and Edgware Branch), two teak chairs (by Mrs. A. A. Brown in memory of her husband) and a visitors' book (by Mr. Allen Aldington).

The warden reported that, in the month to August 16, there had been thirty-seven guests at the home, representing an aggregate of fifty weeks, against fifty-eight guests and eighty-three weeks in August 1957. In the month to September 16, the figures were twenty-six guests and thirty-four weeks, against fifty-seven guests and seventy-two weeks. In the two months covered by the report fifteen contributions, amounting to £57 17s., had been received from guests to supplement weekly payments. A number of gifts in kind were reported, including two watercolours of Birdsgrove House, painted by a guest.

It was reported that the Privy Council had been unable to approve, in the form in which it had been submitted, the proposed alteration to the by-law published on March 15 concerning the issue of receipts. The Finance Committee approved a new form of wording and recommended to the Council that the by-laws should be altered accordingly.

The Finance Committee's report recommended, and the Council approved, the actions of the secretary in making payments amounting to £8,092 and of the treasurer in paying accounts amounting to £83,624.

Registers

In August and September, thirty-one persons were reported registered as "Student," making 466 in the current year, against 556 at the corresponding date in 1957. The names of eighty former members and the addresses of twenty-four premises were reported restored to the registers on payment of the prescribed fees and penalties. The Committee authorised the restoration of the name of a further applicant, removed more than ten years ago. By authority granted by the Council at its previous meeting, twenty-nine applications for reciprocal registration under Sections XIX (14), XIX (16) or XIX (18) of the by-laws had been approved. The Committee authorised the registration of one further applicant under Section XIX (14) on submission of the necessary documents and payment of the prescribed fee.

The Law Committee's report stated that, in July and August 1958, the Society's inspectors and agents had visited 2,727 authorised sellers, 316 listed sellers and 729 drug-store proprietors and similar traders. Fifteen cases of alleged infringements of the Pharmacy and Poisons Act, 1933, Pharmacy and Medicines Act, 1941, and Pharmacy Act, 1954, were considered and appropriate action taken.

THE PRESIDENT reported with regret the deaths of Mr. John Craib Michie, M.B.E., M.P.S., Nairn (a former member of Executive, Scottish Department, and its vice-chairman, 1953-54); and of Professor R. J. Tabor, formerly for many years a member of the Society's board of examiners.

COUNCIL DINNER

To mark the purchase of the Society's House, representatives of branches were invited to dine with the Council at their monthly dinner on September 30. There were also present the members of the Franco-British Pharmaceutical Commission, and a toast to the French visitors was proposed by MR. T. HESELTINE, with responses by MR. FRANK ARNAL and DR. OLIVIER GAUDIN. The president (Mr. D. W. Hudson) said that the Council regretted that not all branches were represented there, but ninety were present. Long before the possibility of purchasing the property arose the Council had wished that the Society's House should be better equipped for social purposes, and with recent changes it had been possible to find space to install suitable catering facilities. It was an accident that the provision of those facilities and the purchase of the property more or less have coincided.

The purchase of the building in August marked the end of the Society's occupancy of its House on a leasehold basis, since it took possession of No. 17 Bloomsbury Square a few months after the Society's foundation in 1841. That building consisted of the present entrance hall of No. 17, the room on the left-hand side of the entrance, and a room at the back (later merged into the lecture theatre), the staircase and octagonal room behind, with three corresponding floors above, and a basement. From that modest beginning the Society's House had grown by the acquisition and adaptation of neighbouring houses.

In 1860 were taken over and internally connected with No. 17, Nos. 73 and 72 Great Russell Street. The group of three houses, though separate, had been faced (by John Nash) with stucco and ornamented so that they had the outward appearance of a single building.

In 1888-90 Nos. 15 and 16 Bloomsbury Square with property at the rear in Pied Bull Yard (now Galen Place) were leased, the buildings demolished and replaced with the present buildings. In 1926 expansion of activities made it impossible to house everything in the existing buildings. Thus began the occupancy of at one time as many as five other separate properties in the neighbourhood. After a reference to the fate of the Brunswick Square headquarters project, the president said the Council eventually came to the conclusion that the Society should concentrate for the time being upon improving and adapting the existing building.

An opportunity occurred to buy the freehold of the Society's House and adjoining property and after full inquiry the Council decided to seize it. The area now covered was more than double that occupied by the Society's headquarters alone. The Society was now the owner of its headquarters and, within limits, free to develop as it wished. The future of the Society's House had been secured on its traditional site, a sentimental factor which he was sure appealed strongly to members of the Society. Thirdly, they had a site large enough for a new building of a size to meet any foreseeable needs. They were in a better position under present conditions to house their activities, and had a good investment.

"In the immediate future we shall press on with intended improvements and are looking forward to providing better amenities for members using the building."

NEW BOOKS

Perfumes and Their Production

E. S. MAURER. *United Trade Press, Ltd.*, Boswell House, 9 Gough Square, Fleet Street, London, E.C.4. 9 $\frac{3}{4}$ x 6 $\frac{1}{4}$ in. Pp. 313. 30s. postage free.

THE book is intended as a day-to-day reference work and desk book for those using perfumery raw materials. Much of the material in Part I has not previously been published, says the author, the various chapters dealing with the perfumer's training and approach, perfumery laboratory techniques, compounding, ageing and filtration, perfuming soaps, cosmetics and other preparations and "top notes" in perfumery. Part II discusses the commonly used perfumery isolates and synthetics and practical hints on the proportional use of most of them are included and together with notes on their specific applications, blending properties and other functions.

Analytical Histology and Histochemistry

E. GURR, F.R.I.C., F.L.S., M.I.BIOL., F.R.M.S. *Leonard Hill (Books), Ltd.*, Eden Street, London, N.W.1, 10 x 6 in. Pp. 327. 70s.

USING his own considerable experience of general laboratory facilities, the author has clearly had a practical intention in producing this book. Essential procedures, normally involving complex apparatus, may sometimes be accomplished without such facilities. Thus Blank, McCarthy and De Lameter developed a freezing and drying technique which did not rely upon expensive equipment. That method Mr. Gurr has included in his book. With the wealth of information provided in this single volume the laboratory worker will find time saved in consulting the wide range of references previously necessary in the subjects of chemistry and histology.

NEW FILM

Simplified Urine Analysis

AMES CO. (LONDON), LTD., Nuffield House, Piccadilly, London, W.1. Technicolor. Sound. 16-mm. Running time twenty minutes.

THE film provides easy-to-follow instruction in carrying out the standardised testing techniques embodied in six of the seven specialist products of the company (Albustix reagent strips for protein; Clinistix reagent sticks for glucose; Clinitest reagent test for sugar; Acetest reagent tablets for diacetic acid and acetone; Ictotest reagent test for bilirubin; Occultest reagent tablets for blood; and Hematest reagent tablets for blood in faeces). The products cover the common urinary pathological constituents that can be detected without microscopy. The film first illustrates the techniques of each test, then shows how a number of urines may be tested concurrently for five substances in a minimum of time. The emphasis is on the ease, convenience and reliability of the tests and the saving in time and equipment. The film was directed by Phillip Sattin, and the commentary is spoken by Frank Phillips. Intended primarily for audiences of general medical practitioners and nurses, it is available, on application to the company, for showing at meetings of pharmacists.

BRITISH PHARMACEUTICAL CONFERENCE, LLANDUDNO, 1958

SYMPOSIUM SESSION DISCUSSIONS

Comments on the development and launching of new drugs

AFTER DR. ROSE and DR. CAMERON had completed their remarks on the laboratory investigation and clinical trials of new medicinal agents, the meeting of the symposium session of the British Pharmaceutical Conference on October 4 was opened to questions from and observations by members present.

DR. G. F. SOMERS, Liverpool, said that one of the difficulties in pharmacology was to decide exactly what to look for. The chemist had many pre-conceived ideas on the relation of chemical structure to drug action. In any screening programme the search should be a wide one, or a possible action of new compounds might be missed. There was also the importance of the statistician's contribution to the work of control.

Who Discovers?

DR. ROSE said it was usually the man who was looking for a particular effect who turned up the drug to produce it. But it was not expected that, if the drug produced did not have the desired effect, it would act against something else. A striking chemotherapeutic effect might sometimes be found in a compound which was not new.

Regarding animal experimentation, it should be appreciated that experimental animals were indeed sacrificed to better the lot of mankind and even of other animals.

MR. S. G. E. STEVENS, London, said it was not necessarily the pharmacist who exercised analytical control over the development of a new drug. People were becoming more interested not only in the action of drugs, but also in the action of the metabolites produced by them. The Food and Drugs organisation in America was making things difficult for the companies producing growth-inducing and therapeutic drugs for animal administration by demanding more information regarding the metabolites that were produced before allowing the products to be used. To what extent in the evaluation of a drug, he asked, ought the long-term effect of metabolic breakdown to be considered? There was the difficulty of availability of sufficient human subjects for clinical trials. In some parts of America State prisoners were occasionally used for such tests, with some reduction in their sentences. To what extent would the authors be prepared to press for experimental work of that kind to be allowed in Britain? Trials on the workers' friends and on volunteers would be trials on normal people. How were the effects statistically related in terms of the abnormal?

DR. GOODWIN said that trials on friends were mostly to determine whether the drug was safe. The metabolites produced were often an advantage in disease of the same or other type. Sentences were not reduced for the volunteers in American prisons, but

certificates of merit were given. It was most unlikely that Britain would ever allow research of that type in the prisons.

DR. J. M. ROWSON, Abadan, Nigeria, agreed with the speaker about the mass of disease in Africa and the primitive condition of many hospitals. He paid tribute to the good work of the pharmaceutical industry in helping to alleviate the suffering. Could he have further information on the screening of new drugs? The problem of stability in handling pharmaceuticals in the tropics was acute; there was usually great deterioration in a short time.

DR. ROSE said that new drugs came in a variety of forms. Sometimes there was a hint of their possible uses, but research workers were working "blind" to begin with. A sensitive biological assay was important.

DR. GOODWIN said the place for research on exotic medicinal plants was in the tropics. There were many pharmacological laboratories there, and material collected should be identified on the spot and its botanical source discovered. Stability in the tropics was one problem; another was administration. Tablets presented a special difficulty. Most of the natives had not been taught to swallow tablets, and found it difficult to do so. Moreover, tablets were a valuable commodity, and the natives would probably take some and sell the rest. Solutions or suspensions that could be taken as a single draught were the most desirable for clinical purposes.

DR. G. R. WILKINSON, London, said it was usual for the pharmacist to be presented with unstable, insoluble material and asked to prepare a stable product within six months. Much research was involved in the preparation of a suitable pharmaceutical product so as to present the material in a satisfactory form and yet unaltered pharmacologically.

DR. ROSE replied that he had chosen his theme in order to stress the importance of the work of the pharmacist in that connection. It was important that the material should be submitted to the pharmacist in the early stages.

Centrally Organised Trials?

MR. J. B. LLOYD, Manchester, said that organising clinical trials in human subjects involved much work for medical staff. Beds had to be set aside that were required for the treatment of sick patients and the instruction of medical students. Had the authors in mind any kind of central bureau for organising such trials? There was also the legal aspect of administering experimental substances to patients. It was necessary to have the patient's consent.

DR. GOODWIN said that at present most of the work was done on a personal basis with friends and students in teaching establishments. The central bureau idea was not very advanced as

yet. He did not know whether the Medical Research Council had been approached. That would be the ideal body to help. It was only difficult to obtain consent for the administration of new drugs if the patient was too ill to co-operate, and in that circumstance it would be unsuitable to try anything experimental, except in some cases of cancer, where the research would be valuable.

DR. ROSE said it would be a great advantage in the first instance to be able to conduct clinical trials in close proximity to the laboratories.

MR. A. BRAGG, Liverpool, stressed the importance of long-term stability tests on the drug itself, on the form of presentation, and on the packaging.

DR. ROSE said that point served to emphasise that the pharmacist should be "in on" the product from the beginning. What was needed was a thorough biochemical study. The action of natural forces on the product could not be ignored.

United States Methods

DR. R. H. BLYTHE, Philadelphia, said the system outlined in the paper was similar to that used in the United States. There was the same general approach. They avoided any definite times for toxicity tests. A number of tests were carried out with high doses in different species of animal before ever the drug was administered to man. Then a single dose was given to man to discover whether the behaviour of the drug was the same in man as in animals, and to determine the optimal dose. Next it would be decided whether further investigation was worth while. If so, further extensive toxicity tests were carried out, followed by clinical trial, then more extensive testing at high dosage before marketing. Their toxicity tests were for longer periods. The Food and Drugs Administration asked for data on safety and for the lethal dose to certain animals to be stated during the first month of trial.

Clinical trial occupied four stages. First trials were on a few subjects at the research stage. There were no State hospitals, only private ones, so manufacturers could subsidise maintained beds for research purposes. Then the drug went to the specialist for trial in a few cases, to determine the behaviour, contraindications and dosage range. Then it was supplied to at least 100 general practitioners in different parts of the country and was tested usually on about 1,000 to 2,000 cases.

The pharmacist's rôle was similar to that described in the paper. He was responsible for the preparation having suitable stability over a long period and maximum acceptance—parenterally, it must be non-stinging; and orally, in a palatable dosage form. The pharmacist would work with the clinician and pharmacologist to ensure that the optimum degree of absorption was

obtained. He was also responsible for carrying through to the production stage, which should be done as quickly as possible.

DR. ROSE said the duration of the period of toxicity tests in Britain could be increased. If during histopathological examination any signs of carcinogenic properties were noted, it was essential that tests should be carried out as soon as possible.

Pharmacist's Rôle

PROFESSOR E. SHOTTON, London, said the main rôle of the pharmacist was the formulation and presentation of the product. Another aspect of the pharmacist's work was that of analytical control. He prepared the prototype which acted as a standard for the analyst to work to. It was important to produce a formulation which the production department could operate and the analyst could maintain. More work was needed on preservation.

DR. ROSE said the pharmacist was responsible for analytical control, but not necessarily for doing the analysis. Physical chemistry played a large part in the work. Many problems could be solved from the beginning by studying the physical properties of the substance, and it was helpful in the choice of excipients, etc.

MR. K. HOLLAND, Romford, said that clinical evaluation was carried on through the whole life of the drug, and the dangers of such experiments became less the more widely the drug was used, but in the early stages, where care for the result rather than for personal safety was the consideration of the research worker, an element of heroism entered. It was most unethical that prisoners should be coerced into agreeing to those experiments.

DR. GOODWIN assured the speaker that in American prisons there was no coercion of prisoners. They were treated extremely well, and over several years of such experiments there had never been any accident or damage to health. There was no question of administration of drugs in an irresponsible manner in Britain.

MR. B. B. NEWBOULD, Sheffield, asked what was the function of the national Press in informing the general public of recent advances in the chemotherapeutic field. Should communication be made through any particular body to ensure accuracy?

DR. ROSE said that most things hailed as wonder drugs by the Press were described as "chance discoveries," and DR. GOODWIN said that in the popular Press only the more sensational aspects hit the headlines. The more responsible papers often had quite good scientific articles written by medical contributors.

MR. R. E. LISTER, Edinburgh, asked about the legality of the use of placebos in clinical trials. Could the speakers comment on the ethical procedure of using placebos in control experiments and withholding drugs of known value from suffering subjects?

DR. GOODWIN said that much suffering was psychological rather than organic and there the placebo would be of as much benefit as the drug. It was important for the person conducting the clinical trial to ensure that the patient did not suffer or forfeit his chance of benefiting from established remedies.

DR. ROSE said that often the established remedy was given as additive treatment.

Safeguards

MR. V. READ, London, asked whether, when those new complex chemical compounds were used in experiments on human beings, the antidotes were known and available beforehand.

DR. ROSE said the best antidote was to withdraw the drug immediately. The first doses were always small. He did not know of any cases where they had been let down badly by information obtained from animals. DR. GOODWIN said they were not always in the dark. If the drug was an antimetabolite, there was always the metabolite on hand, and for arsenicals, antimony, mercurials, etc., there was always dimercaprol to antagonise the action of the metal.

DR. ROSE emphasised the importance of biochemical study, which would often suggest an antidote.

MR. S. DURHAM, Sheffield, asked to what extent the animals used in clinical trials represented in their own state of health the state of health of patients in the tropics. Could not the patients of general practitioners be used for clinical trials?

DR. GOODWIN said the experimental animals were more different from man as a whole than man in England was from man in the tropics. If it could

be arranged with the College of General Practitioners, such an arrangement could provide much information.

DR. A. H. BECKETT, London, said that at Lexington, U.S.A., where tests on the addictive properties of various drugs were carried out, there was a problem with regard to analgesics. To test addiction it was necessary for the patient to be already addicted so as to test the substitution value. How did the authors regard those tests on human beings who were deliberately allowed to become addicted to a drug?

DR. GOODWIN said those experiments were not conducted in England. There might be a small number of patients already addicted by misfortune or by infamous practice, and they were the obvious ones on whom to make tests.

DR. BECKETT said people in Lexington were people who had been imprisoned because they were already addicts. They were allowed to become addicted to one kind of drug, and the effect of substitution examined.

MR. J. C. HANBURY, Ware, said the potential medicinal value of some natural indigenous drugs was obscured by the traffic in "junk." Such drugs should be examined and appraised in their country of origin, and rubbish and "mumbo-jumbo" eliminated. The standard of ethics in medicine and pharmacy in most countries was so high that there was little danger of abuse of clinical-trial facilities. The deliberate creation of a state of physical or mental unease in order to test a curative agent would raise a great medical issue.

MR. T. D. WHITTET, London, said the Home Office statistics on experimental animals were misleading and played into the hands of the antivivisectionists. Many of the "operations" were painless injections.

MR. D. F. SMITH, Bournemouth, asked whether the present methods of clinical trial were adequate to ensure that material was not launched on the market before it was proved to be clinically effective.

DR. GOODWIN replied that there was probably a certain amount of material which reached the market without adequate trial, but the papers had emphasised the efforts made to prevent that sort of thing from happening.

DR. ROSE said it was characteristic of progress in the discovery of new drugs that a certain amount of material did become redundant.



CONFERENCE GOLF: Mr. Gwyn Edwards, Penmaenmawr, drives off from the sixteenth tee, watched by his opponent, Mr. F. E. Mellor, Liverpool, in the golf tournament. Mr. Mellor was runner-up in the competition.



CONFERENCE TENNIS: Awaiting their turn to go on to the courts; Mrs. N. Williams, Reading, Mr. and Mrs. J. C. Leigh, Liverpool, Miss J. J. Cottom, Leicester, and Mr. P. D. King, Llanfairfechan.



CONFERENCE BOWLS: Mr. and Mrs. C. Brooke, Huddersfield (right) challenge Mr. and Mrs. W. English, Huddersfield, in the bowls competitions.

BRITISH PHARMACEUTICAL CONFERENCE, LLANDUDNO, 1958

CONFERENCE SCIENCE

Further summaries of science session papers and discussions

The reproducibility of analytical results by students using college burettes and pipettes was the subject of the next paper, which was read by the author.

Precision of Some Analytical Procedures

I. USE OF PIPETTE AND BURETTE

A. R. ROGERS

THE author has made estimates of the variance associated with the calibration of a number of 10- and 20-mil pipettes and 50-mil burettes of grade-B quality, and of the variance associated with their use by a class of students. Comparison with the variance in results of students carrying out simple titrations with that apparatus indicates that the chief components of the latter variances have been identified and measured and a coefficient of variation is given.

(From the school of pharmacy, Brighton Technical College)

Discussion

Dr. Foster said that analysts were often worried about precision. It was customary to judge it by the closeness of the duplicated results, but that method might be misleading. It had been said that duplicate analyses made at the same time were not truly random, and he wondered if the author's results would have been different if the duplicate titration had been made on another day. He would also like some indication of how the apparatus was cleaned.

DR. C. C. GARRATT, Nottingham, said he had no criticism of the work recorded in the paper, so long as it was kept in the intended sphere: the accuracy of work in the pharmacy schools. He would deprecate any suggestion that the specifications in official assays should be altered on the strength of the investigations. He asked that school results should be, in future papers, supplemented by findings from industrial laboratories. He thought the errors that could be found among experienced analysts would be much greater than the analysts imagined.

DR. J. G. DARE, Leeds, said that analytical errors were admitted by analysts but few knew the size of them. After completing the work for the paper Dr. Capper and he had presented in 1957, he had had the subject material issued to students. Every student had duplicated his experiments with the material. The results came much closer to the standard deviations if the days on which the work was done were varied.

MR. H. D. C. RAPSON, Betehworth, gave his observations carried out with similar data during supervision of students in laboratory work. He thought the factor of "skewness" came into such results, and would like the author to say something about that.

Mr. Rogers said that in data published so far, the skewness phenom-

enon was showing up all the time. Some of the experiments had been spread over several days. The apparatus has been cleaned with a chromic acid mixture, and rinsed twenty times with tap and two to three times with distilled water. To an inquirer who asked the meaning of "skewness," he described it briefly as asymmetry in the curvature.

DR. L. THORNTON, London, said the 0·25 per cent. coefficient seemed alarmingly high, and asked whether it was legitimate at the present stage to add the calibration variation. The author's reply was that the figure was high or low according to the experience of the person viewing it.

MR. C. A. JOHNSON, Nottingham, thought the author should, in a future work, pay more attention to the recognition of the end point. In work he described, a "sharp" indicator had shown a much lower standard variation than a less sharp indicator.

Two more papers in a series on neuromuscular blocking agents occupied the remainder of the morning session. Both were by a four-member team working in Glasgow, and the two were discussed together. Both were read by Dr. Phillips.

The first was on:—

Neuromuscular Blocking Agents

II. PREPARATION AND PROPERTIES OF A SERIES OF NSN- AND NNN-TRIS-ETHONIUM COMPOUNDS

D. EDWARDS, J. J. LEWIS, J. B. STENLAKE and M. S. ZOHA

THE paper describes the preparation of two further NSN-tris-ethonium compounds: dioctasulphonium triethiodide (DOSE) and dideasulphonium triethiodide (DDSE). The author also synthesised the bis-quaternary compound 7-dioxothiatrideylenebis (triethylammonium iodide), and the NNN-tris-quaternary compounds dihexazonium triethiodide (DHAE), dioctazonium triethiodide (DOAE) and dideazonium triethiodide (DDAE). All the compounds possess neuromuscular-block activity in the gastrocnemius muscle-sciatic nerve preparation of the cat, the phrenic nerve-diaphragm preparation of the rat and kitten, and as measured by the rabbit head drop and mouse paralysis methods. Dihexazonium triethiodide and the sulphone dihexone show tubocurarine-like activity; dioctasulphonium triethiodide and dioctazonium triethiodide were predominantly tubocurarine-like but had some transitional properties, whilst dideasulphonium triethiodide and dideazonium triethiodide resembled deamethonium. Dihexazonium triethiodide was about equipotent with tubocurarine on the cat. Marked species variations in potency were observed.

The theoretical implications of the experimental observations are discussed in the paper.

III. SOME LINEAR NNNN-TETRAETHONIUM COMPOUNDS

D. EDWARDS, J. J. LEWIS, J. B. STENLAKE and M. S. ZOHA

EXTENDING their observations of neuromuscular blocking activity in trisonium compounds, the authors prepared the linear tetraazonium compounds: trihexatetraazonium tetraethiodide (THAE; I) and tridecatetraazonium tetraethiodide (TDAE; II). The neuromuscular blocking actions of I were similar to those of tubocurarine (TC). The properties of II were different in ways set out in the paper. The properties of the tetraethonium compounds I and II are recorded as being similar to those of the corresponding tris-ethonium compounds that the authors have investigated, in that inter-onium group-chain length is a major factor in determining the type of neuro-muscular blocking activity.

(From the school of pharmacy, Royal College of Science and Technology, Glasgow, and department of materia medica and therapeutics, University of Glasgow)

Discussion

DR. G. F. SOMERS said the gastrocnemius was a mixed muscle, and the neuro-muscular blocking agents had varying effects. It might be better to study their effects on avian and on several different muscles.

DR. LEWIS replied that similar experiments had been carried out on avian and other muscles, and the results had shown no variation. Within the group of drugs, there was great species variation in potency, and in mode and type of action.

MR. H. B. C. RAPSON, Betehworth, said that the series of compounds might be considered a series of rulers by which to measure a receptor site. The change from non-depolarising to depolarising activity was definitely associated with the lengths of the chains. He would like some guidance on the matter of the twitching, and what were the histological features of the surface at which the reaction took place? — DR. LEWIS replied that the mechanism of depolarisation was not clearly understood. There was presumably a breakdown of some kind of polarised layer.

DR. F. HARTLEY, London, asked how concentration affected findings with derivatives having assymetrical molecules?

Already, said Dr. Lewis, they had prepared and tested some derivatives with assymetrical members in the chain. One was predominantly curare-like and one was specifically depolarising. Only in matters such as toxicity was there a closer resemblance to deamethonium.

DR. A. H. BECKETT, London, said that, in examining the hypothetical receptor surface, the approach by a stereochemical route should be considered the most sensitive tool. DR.

LEWIS said that the idea had not been overlooked, but there were many fundamental points to be settled before that stage was reached.

DR. BECKETT continued that many of the receptors in the body must have similar requirements, but with minor modifications around the site to produce discrimination in action. The three-dimensional approach should be considered in conjunction with the other factors. DR. LEWIS said that it was possible to alter in a controlled way the shape and size of molecules, but the receptor surface could not be standardised. It would be of interest to make rigid molecules in which the possibilities of stereochemical change was negligible.

MR. RAPSON said that in low concentrations the surface activity of the compounds was different from what it was at high concentrations. Some change might be due to up-ending of the molecules or to interference by some other substances, possibly acetylcholine at the receptor site.

PROFESSOR G. BROWNLEE said the greatest paradox was the non-absolute nature of those actions. Whether the substance was predominantly depolarising must be known in absolute terms, but it would never be known whether the competitive effect was there at different concentrations, since the membranes would not be able to repolarise and demonstrate it. — DR. LEWIS replied it was not possible to be absolutely certain, because of the marked species differences. Ultimately the test object must be man. Animal work in that route was not satisfactory.

DR. SOMERS said it had been pointed out that the cat behaved similarly to man, but DR. LEWIS did not agree that that was so.

The Tuesday afternoon session opened with a paper by Dr. Train on:—

"Angle of Repose" in Powders

DAVID TRAIN

An intrinsic property of any powder is its resistance to differential movement between particles when subjected to external forces. Probably that property should best be described as interparticulate friction, of which the angle of repose is a manifestation. Four methods of determining the angle of repose of free-flowing powders have been critically compared, using graded samples of glass balls, lead shot and silver sand. The method used influenced the result. Results of all methods have been correlated graphically, and values of static and dynamic interparticulate friction have been assessed for the materials used. It was found that results for spheres could be correlated on one graph, irrespective of type of material, and an explanation is given to account for that. For any given method the magnitude of the angle of repose is shown to fall as the size of the heap or bed increases.

(From the department of pharmaceutics, school of pharmacy, University of London)

The second paper at the session was on a related theme. Read by Mr. Craik it dealt with:—

Flow of Powders in Humid Conditions

D. J. CRAIK and B. F. MILLER

THE flow properties of starch powders and of mixtures of starch with light magnesium oxide and other finely divided powders were investigated using the angle-of-repose method. The electron microscope demonstrated the adsorption of the fine powders on to the surfaces of the larger particles, and it was considered that the greatly improved flow properties of the mixtures were due to the reduction of the adhesion between particles. A high moisture content is known to reduce the easy flow of some powders. Experiments were designed to measure the flow properties of powders of varying moisture content and to determine to what extent the addition of magnesium oxide might affect the properties under those conditions. The conclusion is that, if it can be assumed that the adsorbed water resides on the surface of the crystal, a quantitative explanation can be given of both the effects of moisture on the flow properties of crystalline powders and of the effects of added magnesium oxide in maintaining the easy flow of moist powders.

(From the plant laboratory, Boots Pure Drug Co., Ltd., Nottingham)

Discussion

After stressing the importance of the free-flowing powders in some manufacturing operations, THE CHAIRMAN said the properties of such powders had some relationship with angle of repose, and Dr. Train had examined that relationship in his investigations. He had used spheres. The system could, however, become more complicated. There could be crystalline powders. Would Dr. Train recommend grinding the crystals to produce spheres? He asked Dr. Craik whether he had mixed his powders before or after the moisture had been taken up? Electrostatic charges were a known hazard in grinding. Had the authors rather skated over that aspect?

MR. N. J. VAN ABBE, Loughborough, sought an explanation of the effect of the additive. As a solid lubricant, limiting the concentration of magnesium oxide seemed from the paper to give optimal flow properties. That was not so with talc. The findings seemed to contradict work mentioned in Dr. Train's paper. Perhaps Dr. Train would think it too soon to ask for practical applications from his paper, but he would like to know if the tests could shed light on the destructibility of mixed powders, as the trend in tabletting was toward the tablet with small ingredient, but large diluent, content.

MR. D. W. HUDSON, Hove, was interested in practical applications in perhaps a reverse sense, he said, to Mr. Van Abbé. How did the data throw light on the troublesome problem of layering in tablet manufacture? Was the gravity of the powder an important factor? In certain feeds he had found layering to occur even with a single substance laked with colour.

DR. D. TRAIN, London, said his investigation had started as a single exer-

cise, but, like Topsy, had "grown." He had wanted to study magnesium carbonate, but when anomalies became apparent he had been driven to study the simplest system. It was hoped to extend the field of the work. To Mr. Van Abbé he said work was still to be done on how lubricants affected angle of repose. He thought that angle of repose was probably not a useful single test for distribution of mixed powders. Layering, he told Mr. Hudson, was tied up with density. Shape was also a factor.

DR. CRAIK, replying on the question of electrostatic charges, said that investigations had been made with sources of ionising radiation, but they had not found much effect. It had been thought that adhesion of dry starch could be due to such a charge, but ionising radiation had not caused any improvement in the flow. The powders had been mixed before exposure to humidity, though he did not regard that as important, because the effect was believed purely mechanical. The determination of moisture had been on the pure material. His conception of a solid lubricant was of a substance that allowed cleavage to take place easily and on a plane. He had one thought to offer on Mr. Hudson's layering problem: one effect of absorbing a dye would be to affect ease of fusion of the particle.

MR. J. H. OAKLEY, London, after querying the second drying of the sand, said he had not been able easily to correlate the two methods of obtaining the angle of return. He wondered how Dr. Train had measured his end point in the angle-of-slip tests.

DR. TRAIN said that there had seemed no significant difference in the size of the glass spheres. He had himself been sceptical as to the effect of the tilted bed, but others had noted the same effect. His measurement of angle in the cylinder method had been with a holed ruler across the diameter of the cylinder and in line with the powder level. When the powder slipped, the roller remained in position.

His redrying of the sand perhaps showed lack of confidence in his convictions, but have been done to avoid massing.

MR. RAPSON said that, if Dr. Craik's premises were accepted, then some explanation must be given why the sodium chloride did not react as expected. He thought it must be accepted that the "dry" sodium chloride and sucrose were not actually dry. Therefore some explanation of the anomaly must lie in the film of moisture, and the higher adhesion of the sucrose must be explained on the basis of a thicker water layer.

DR. CRAIK replied that Mr. Rapson had picked on the most striking anomaly of his results. He himself had no explanation. The powders were only nominally dry, and might have a water mono layer, but adhesion by surface tension would not fit the facts.

MR. RAPSON said his point was that the water between the surfaces must be taken into account, but Dr. Craik said that the layer of H_2O should not interfere with the intramolecular forces.

(To be continued)

A NATIONAL CONFERENCE ON POLLUTION

Effects of solid, liquid and gaseous effluents upon living material

A CONFERENCE upon the effect of pollution upon living material was held in London on September 25 and 26. The organisers were the Institute of Biology, and fourteen papers were presented. They dealt with pollution of rivers, of the atmosphere, and by radioactive materials.

MR. F. K. T. PENTELOW, discussing the general condition of rivers, said that a stream was to be considered polluted or not according to the purpose to which the water was put. The discharge of waste water into rivers without regard to effect might come within the definition of pollution, and present regulations debarred the discharge into rivers of waste water from industrial premises without first obtaining the consent of the appropriate river board.

The biological effects of water pollution were considered by DR. H. B. M. HYNES, Liverpool, who said that pollution could be classified into six categories: Poisons; suspended solids; organic matter; non-poisonous salts; simple deoxygenators; and heat. Organic matter in industrial effluent contained unstable readily oxidisable compounds that eventually reduced the available oxygen. In extreme cases the oxygen content became zero, causing sulphides and methane to be produced. Heat from warm effluent enhanced the toxic effects of pollution.

In two papers dealing with carbon, nitrogen and sulphur cycles in the Thames estuary, and their influence on the oxygen balance, MESSRS. A. B. WHEATLAND and A. L. H. GAMESON said that in the Thames during the summer months the central and most polluted reaches had sometimes been devoid of oxygen. The resulting occurrence of sulphides caused complaint and stimulated investigation. Net utilisation of oxygen between Teddington and Southend in 1950-53 averaged about 700 tons a day. The chemical sources of oxygen were derived from nitrate and sulphate reduction in the river and from photosynthesis by phytoplankton. When the nitrate at a particular point became exhausted, the resulting anaerobic conditions favoured reduction of sulphate to sulphide.

During discussions on the papers, a speaker said that growth during the summer months was equivalent to the utilisation of 1.4 gm. of carbon per sq. metre per day. Another speaker, giving information on work done in California, U.S.A., said that a new aquatic herbicide, acting within twenty-four hours, destroyed weeds, which floated to the surface and were removed. The growth yields, he said, were higher than those quoted for this country. DR. MANN, Reading, described work on the occurrence of a tropical worm immediately beneath hot effluent.

DR. HYNES, Liverpool, suggested the "imaginative" use of artificially heated lakes and rivers for the selective introduction of tropical species. DR. ROBERTS, in data relating to the

effects of detergents, said that detergents in a concentration of 3-4 parts per million, with sewage or alone, inhibited the growth of a ranunculus species. Lissapol non-ionic detergent caused no toxic effects at a concentration as high as 20 p.p.m.

Air Pollution

A paper on the effects of air pollution on plant growth, given by DR. J. K. A. BLEASDALE, showed that air pollution by hydrogen fluoride, sulphur dioxide and coal smoke influenced plant growth. Growth was slowed when photosynthesis was reduced as a result of light deficiency from soot and tar deposits on leaves and photoperiod-controlled processes were affected.

"Fluorosis in Farm Animals" was illustrated by a cine film, the work of the author, DR. RUTH ALLCROFT. In Britain, she said, fluorosis occurred almost exclusively in farm animals. It resulted from industrial fumes derived from aluminium production; brickworks; glass, enamel and colour works; the calcining of ironstone; steel and metal works; and potteries. British soils contained 50-500 p.p.m. of fluorine; and ironstone ore up to 1,200 p.p.m.; in water the content rarely rose above 1-6 p.p.m. Herbage near sources of atmospheric pollution contained fluorine up to 2,000 p.p.m. Below certain significant levels fluorine was beneficial but above critical levels it was toxic. In cattle, poisoning resulted from the ingestion of small amounts in food and water over a period. Symptoms of cattle fluorosis were lameness; stiff, laborious gait; recumbency; elongated hooves; diarrhoea; anaemia; lowered milk yield; and reduced fertility. No antidote was yet known, but symptomatic alleviation could come from the addition of 0.5 per cent. of aluminium sulphate to rations containing 50 p.p.m. of fluorine.

The effects of atmospheric pollution on man had been investigated by DR. P. G. LAWTHORP, of the Medical Research Council. Physiologically pure air had not been defined, he said, and there was only an imperfect understanding of the effects of dirty air. Acute pollution occurred in winter as a result of temperature inversion over a town; it might be gaseous or particulate (and probably acidic), and manifested its injurious effect by causing the death of old people and "respiratory cripples." Chronic bronchitis was a secondary important effect exacerbated by repeated exposure.

DR. E. T. WILKINS, giving mortality statistics relating to air pollution, said that in 1892 a London December smog caused about 3,000 deaths; in 1952 4,000 deaths occurred in a similar manner, and in January 1956 a further 1,000 deaths. He suggested that suspended particles were responsible, by reason of their irritant effects, for chronic bronchitis. The discussion upon the effects of air pollution paid particular attention to the effects of fluorine in cattle. DR. ALLCROFT stated

that the fluorine content of milk was not affected.

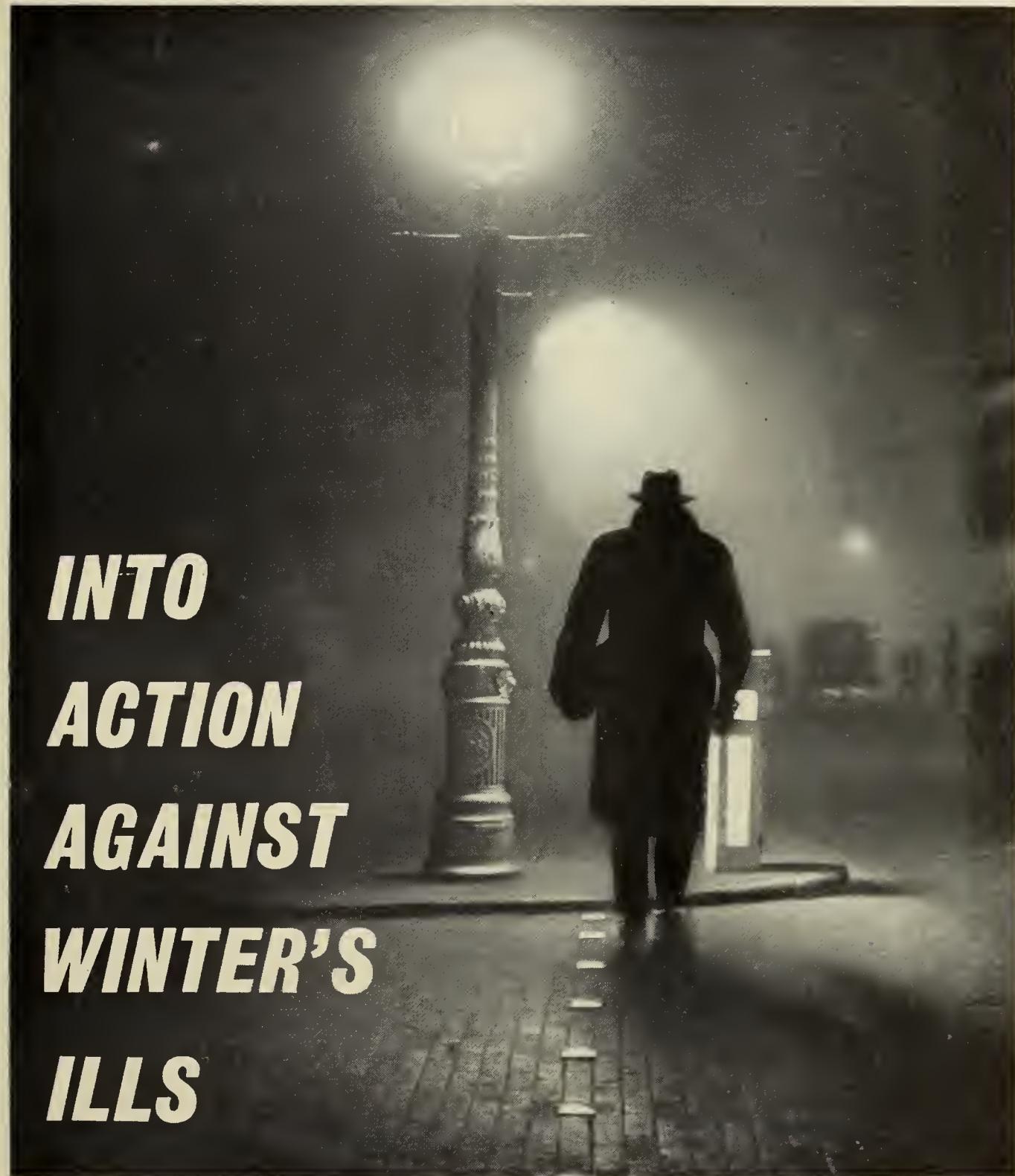
Radioactivity Safeguards

The uptake of fission products by plants in areas adjacent to power stations was discussed by DR. H. J. M. BOWEN and work upon fission products and aquatic organisms by MR. W. L. TEMPLETON. The papers referred to thirty-six elements in the form of 300 isotopes that occurred as a result of fission. Some lost their activity quickly. Others had a half-life between seven days and 100,000 years. Of all elements in the fission products derived from reactors or atomic explosions, only iodine and possibly niobium were considered essential to plants or animals. Observations in 1954-57 revealed iron, cobalt, manganese, zinc and calcium isotopes in fall-out and taken up by plant life. Strontium was the most dangerous, as its incorporation into human bone, following the consumption of edible plants, created a source of internal radiation. "Accumulator plants" had a selective action for certain elements. Thus *Bertholletia excelsa* (brazil nut) concentrated barium; while water-cress, pineapple, guava fruit and marine algae concentrated iodine. The best accumulators for strontium known to Dr. Bowen were the brown algae. *Euglena intermedia*, a fresh-water alga, took 96 per cent. of caesium-137 from a prepared medium in thirty-four days. Sea disposal at Windscale influenced the edible seaweed *Porphyra umbilicalis* and the bottom feeding plaice *Pleuronectes platessa*.

The disposal of radioactive wastes from nuclear power stations was described by MR. R. H. BUNNS. Spent nuclear fuel from reactors, he said, provided the greatest amounts of waste. Solid waste could be burned, and one proposed method involved the eventual production of an unleachable fused mass that could be buried.

The genetic effects of radioactive pollution were the subject of a paper by DR. T. C. CARTER (Medical Research Council). The hazards of radioactive dust, he said, were external radiation to the body. If it were ingested and secreted by the body, as with iodine in the thyroid gland, an internal radiation source was created. The genetic effects of such pollution were confused with the effects from naturally occurring radioactive background, and from other man-made sources, such as x-rays. Radiation in medium and high doses showed a linear relationship with the gene mutation rate.

In the discussion DR. CARTER emphasised that artificial radiation was not yet 1 per cent. of normal radiation. Animal experiments would yield information that could indicate a possible course of events in human populations; factual data upon human effects after maximum dosages would not be known in the lifetime of those present.



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TRADE REPORT

The prices given are those obtained by importers or manufacturers for bulk quantities or original packages. Various charges have to be added whereby values are in many instances augmented before wholesale dealers receive the goods into stock. Crude drugs and essential oils vary greatly in quality and higher prices are charged for selected qualities.

LONDON, OCTOBER 8: There was an active demand for SENEGA during the week and spot holders were said to have cleared their stocks. Meanwhile quotations for the root at origin varied by as much as ninepence per lb.

There was little or no extra inquiry for other seasonal drugs. Canary Isles COCHINEAL was in easier supply, the price now quoted for the black brilliant being 2s. per lb. lower than previously. Reduced prices for CINNAMON QUILLS for shipment failed to stimulate inquiry. Zanzibar CLOVES were slightly lower on the spot but otherwise SPICES showed no price movement. CUMIN SEED advanced by 5s. or 10s. per cwt. according to source.

Spike LAVENDER and Spanish SAGE OILS tended to be firmer but ROSEMARY and PENNYROYAL were each off sixpence per lb.

Higher rates for zinc metal were recorded during the week and manufacturers of ZINC OXIDE, B.P., increased their schedules by £2 per ton on October 6.

Rumours that an impending increase in the price of SULPHUR in the United States were discounted by the chairman of one of the large producers.

Pharmaceutical Chemicals

AMPHETAMINE.—One to 10-kilo lots are: BASE, from 140s. to 160s. as to quantity; SULPHATE is 110s. to 130s. and *d*-AMPHETAMINE SULPHATE, 405s. to 420s. for similar quantities.

ATROPINE.—Rates for 16-oz. (500-gm.):

	per oz.	per kilo
	s. d.	s. d.
ALKALOID ..	39 0	1375 0
HYDROCHLORIDE ..	36 0	1269 0
METHONITRATE ..	39 0	1375 0
METHYL BROMIDE ..	38 6	1357 0
SULPHATE ..	34 0	1198 6

BRUCINE.—ALKALOID in 100-oz. lots is 4s. 9d. per oz. and SULPHATE, 4s. 3d.

CHLOROXYLENOL.—B.P. quality is 5s. 3d. per lb. for 1-cwt. lots and 5s. 1d. for 10-cwt.

CITRIC ACID.—Quotations (per cwt.) for domestic material are 225s. for 1-4-cwt. lots and 220s. for 5-cwt. lots.

CRESOL.—Price of B.P. quality from distillers is 7s. 9d. per gall. in 5-gall. lots.

EMETINE.—Price for 32-oz. lots of the HYDROCHLORIDE is 270s. per oz. The BISMUTH IODIDE is 127s. per oz.

FORMALDEHYDE.—B.P. solution in 1-4-drum lots is £39 15s. per ton; 5-drum lots are £38 15s. per ton.

GLYCEROPHOSPHATES.—Rates per lb. for 1-cwt. lots are as follows:—ACID, B.P.C., 20 per cent., 5s. 9d.; CALCIUM, soluble, B.P.C., 11s. 9d.; IRON, B.P.C., scale, 15s. 9d. and powder, 14s. 9d.; MANGANESE, soluble, B.P.C., 14s. 3d., and insoluble, 7s. 6d.; MANGANESE, B.P.C., 26s. 3d.; POTASSIUM, 50 per cent., B.P.C., 3s. 9d. and 75 per cent., B.P.C., 5s. 6d.; SODIUM, 50 per cent., B.P.C., 3s. 1d. and 75 per cent., B.P.C., 4s. 6d.

GUAIACOLS.—LIQUID B.P. is 16s. 3d. per lb. for 28-lb. lots; CRYSTALS, 16s. 9d.; CARBONATE, 18s. 3d.

HEXAMINE.—B.P. is 1s. 11½d. per lb. for 1-ton lots, delivered in 1-cwt. kegs. Technical is threepence per lb. under those rates.

HYDROQUINONE.—Quotations for 1-cwt. lots are 11s. 6d. per lb. or 25s. 4d. per kilo.

HYOSCINE HYDROBROMIDE.—Price per oz. is 102s.

IODINE.—Resublimed is 13s. 2d. per lb. in 1-cwt. lots, or 12s. 8d. in 5-cwt. lots. Minimum delivered rate for CRUDE is now 15s. per kilo.

ODOFORM.—Powder is 22s. 4d. per lb. in 28-lb. lots; 21s. 8d. in 1-cwt. and 21s. 1d. in 5-cwt. lots. Crystals are 3s. per lb. more than the powder.

ISOPRENALE SULPHATE.—B.P. is 1s. 3d. per gm. for 1,000-gm. lots and 1s. 9d. per gm. for 100-gm. lots.

LACTATES.—CALCIUM, B.P., is 2s. 10d. per lb. in 5-cwt. lots and 2s. 11d. in 1-cwt. lots; CALCIUM SODIUM for similar quantities is 4s. 9d. and 4s. 10d. per lb.

LACTIC ACID.—B.P. is 4s. 5d. per lb. for 12-winchester lots and 4s. 4d. for 5-cwt. lots.

LEAD ACETATE.—B.P. crystals are 200s. per cwt. and technical, 180s.

MAGNESIUM CARBONATE.—Minimum bulk rate for LIGHT is 121s. per cwt.; HEAVY is 160s. per cwt. for 15-cwt. lots and about 130s. per cwt. for 1-ton lots.

MAGNESIUM CHLORIDE.—One-cwt. lots are quoted at 1s. 10d. per lb.; 5-cwt., 1s. 7d.

MAGNESIUM HYDROXIDE.—Makers' prices for B.P.C. are 1-cwt. lots, 3s. 5d. per lb. and 1-ton, 3s. 2d. per lb.

MAGNESIUM OXIDE, B.P.—Bulk rates are as follows:—LIGHT, 3s. 2d. per lb., and HEAVY, 5s. 10d. per lb.

MAGNESIUM PEROXIDE.—Price (per lb.) for 1-cwt. lots of B.P.C. (15 per cent.) is 3s. 11d.

MAGNESIUM SULPHATE.—Quotations for B.P. in minimum 1-ton lots vary between £18 and £21 per ton according to size of crystal and manufacturer. Exsiccated is £42 per ton. All ex works.

MAGNESIUM TRISILICATE.—In 28-lb. packages the prices (per lb.) are now as follows:—28-lb., 4s. 9½d.; 1-cwt., 3s. 10d.; 5-cwt., 3s. 7d.; 1-ton, 3s. 1d.

METHOIN.—B.P. is about 120s. per lb.

METHYL SALICYLATE.—Five-ton lots are 3s. per lb.; 1-ton, 3s. 0½d.; 10-cwt., 3s. 1d.; 5-cwt., 3s. 2d.; 1-cwt., 3s. 3d.

PAPAVERINE.—Synthetic HYDROCHLORIDE is 295s. per kilo, minimum 1-kilo lots.

PARALDEHYDE.—B.P. in 12-winchester lots is 2s. 7d. per lb.; 10-gall. carboy, 2s. 2d., and 5 carboys, 2s. Stabilised in 40-gall. drum lots, 166s. per cwt.; technical cal, 149s. per cwt.

PHENACETIN.—In 5-cwt. lots makers' price is now 6s. 8d. per lb.; 1-cwt., 6s. 9d.

PHENYTOIN SODIUM.—B.P. is 23s. per lb. in 1-cwt. lots or 25s. less than 56 lb.

POTASSIUM CHLORIDE.—In 1-cwt. lots B.P., is 1s. 6d. per lb.

RESORCINOL.—1-cwt. lots are now quoted at 13s. per lb. by manufacturer.

SALOL.—Quotations for B.P.C. are about 9s. per lb. for 1-cwt. lots.

SULPHOCARBOLENES.—SODIUM PHENOSULPHONATE, B.P.C., 1949 (powder) is 5s. 6d. per lb. in 1-cwt. lots and ZINC, B.P.C., 1949, is 5s. 6d.

SULPHUR.—B.P. PRECIPITATE in 1-ton lots is £120 per ton, delivered ex works.

TARTARIC ACID.—Rates for the home trade are as follows:—10-cwt. lots, 290s. per cwt.; 5-9 cwt., 292s.; 2-4 cwt., 294s.; 1-cwt., 295s.

TERPINEOL.—Prices of B.P. grade are from 3s. to 3s. 6d. per lb. as to quantity.

TERPIN HYDRATE.—Prices are from 6s. per lb., upwards as to quantity.

THEOBROMINE.—ALKALOID in 50-kilo lots is 55s. per kilo (25s. per lb.) and SODIUM SALICYLATE, 44s. 6d.

THEOPHYLLINE.—ALKALOID (50-kilo lots): ANHYDROUS, 39s. per kilo and B.P., 36s. 3d.; AMINOPHYLLINE, 36s. 3d. per kilo.

UREA.—Manufacturers' rates for pharmaceutical grade are £63 per ton in 1-cwt. bags non-returnable. Technical quality is £44 10s. per ton.

ZINC OXIDE.—Dearer. B.P. quality in 2-ton lots is now £104; 1-ton, £105; 10-cwt., £105.

Alcohol

BRITISH SPIRIT per proof gall.:—

Ethyl Alcohol: (95 per cent. Gay Lussac, 66 o.p.); where the number of proof gall. taken over any one year ended March 31 is 300,000 or over 4s. 0½d.; 200,000 and less than 300,000, 4s. 0½d.; 100,000 and less than 200,000, 4s. 1½d.; 50,000 and less than 100,000, 4s. 1½d.; 10,000 and less than 50,000, 4s. 2½d.; 2,500 and less than 10,000, 4s. 2½d. Prices are exclusive of duty and are for tank wagon lots. In 40-gall. drums there is a surcharge of 1d. per proof gall. The following grades are subject to a premium on the above prices as set out in the next paragraph:—

Absolute Alcohol, 95·5 per cent., 74·5 o.p.; 3d. more per proof gall., the special high strength (99·9 per cent., 75·2 o.p.), 5d. more. *Doubly Rectified Alcohol* (S.V.R.) 95·8 per cent., 68 o.p., is 3d. more and *P.I. Rectified Alcohol*, 96·1 per cent., 68·5 o.p., 8d. more. *R. R. Absolute Alcohol* (re-rectified, 99·7 per cent., 75 c.p.), 14s. 10d. per bulk gall. net.

Methylated Spirit

METHYLATORS' rates per bulk gall. in Great Britain are as follows:—

Industrial Methylated spirit: Strength 61 o.p., 500 gall. and over, 5s. 11d.; 100 gall. and under 500 gall., 6s. 2d.; 40 gall. and under 100 gall., 6s. 5d.; 10 gall. and under 40 gall., 6s. 10d.; 5 gall. and under 10 gall., 7s. 3d. Strength 64 o.p., ½d. per gall.; 66 o.p. (B.P.), 1d.; 68 o.p., 3½d. more than the above rates with 74 o.p. at 6s. 8½d., 6s. 11½d., 7s. 2½d., 7s. 7½d. and 8s. 0½d. per gall. for similar quantities. Tank wagon delivery is 1½d. per gall. off list price—minimum, 500 gall. For industrial methylated spirit of standard toilet quality prices are from 7s. 2½d. (tank wagon) for 500 gall. to 8s. 8d. for 5-10 gall. (in drums) for 61 o.p.

Pyridinised industrial methylated spirit: Strength 66 o.p., 500 gall. and over, tank wagon delivery, 6s. 2d.; 100 gall. and under 500 gall. (in drums), 6s. 6½d.; 40 gall. and under 100 gall., 6s. 9½d.; 10 gall. and under 40 gall., 7s. 2½d.; 5 gall. and under 10 gall., 7s. 7½d.

Mineralised methylated spirit: Strength 64 o.p. in one delivery, 100 gall. and under 500 gall., 6s. 6½d.; 40 gall. and under 100 gal., 6s. 9½d.; 10 gall. and under 40 gall., 7s. 2½d.; 5 gall. and under 10 gall., 7s. 7½d.

Methylated resin finish is 3d. per gall. over and *methylated shellac finish* is 1s. per gall. over the prices of pyridinised methylated spirit.

Terms:—Deliveries free and carriage paid on returned empties; net cash.

Crude Drugs

ACONITE. — Spot supplies of Spanish *napellus* are 2s. 6d. per lb.

AGAR. — Kobe is 10s. 9d. per lb., duty paid; for shipment, 8s. 11d.

ALOES. — Cape prime on the spot is 230s. per cwt. and for shipment, 210s., e.i.f.

ANISE (STAR). — Chinese is 130s. per ewt. e.i.f. and 140s. spot in bond.

BALSAMS. — Quotations per lb. are:—
CANADA: Spot, 23s. COPAIBA: Para from 7s. 6d. to 9s. 6d., duty paid. PERU: Spot, 10s. in bond. TOLU (genuine as imported): 24s.; B.P., 17s.

BELLADONNA. — Herb is 2s. 3d. per lb. on the spot. Root is 1s. 6d. spot; shipment, 1s. 3d., e.i.f.

BENZOIN. — Sumatra block on the spot is £22 to £28 as to quality. No. 1 for shipment, £23 10s.

BUCHU. — Spot rounds are 6s. 3d. per lb. and shipment, 5s. 9d., e.i.f.

CALAMUS. — Root is quoted at 1s. 4d. per lb., e.i.f.

CAMPHOR. — B.P. POWDER is from 5s. per lb., duty paid. TABLETS, $\frac{1}{4}$ -oz., are 6s., in bond.

CARDAMOMS. — Aleppy greens are short on the spot, nominal value 15s. per lb.; October shipment, 14s. 3d., e.i.f. No. 1 seed for shipment, 20s. 6d., e.i.f., spot. 24s. 3d. nominal.

CASSIA. — Selected whole bark for shipment is 220s. per ewt., e.i.f., and extra-selected broken, 210s. e.i.f. Spot: Whole 235s. in bond nominal. *C. fistula*, 110s. per ewt.

CHERRY BARK. — Thin natural is 1s. 5d. per lb., and rossed is 1s. 11d.

CHILLIES. — Spot Mombasa are 185s. per cwt. and Zanzibar, 225s.

CINNAMON. — Ceylon for shipment (e.i.f.) per lb., OOOO, 6s. 10d.; OOO, 6s. 8d.; OO, 6s. 4d.; seconds, 4s. 6d.; featherings, 1s. 9d.; quillings, 3s. 11d.; chips, 1s.

CLOVES. — Zanzibar on the spot are 3s. 1 $\frac{1}{4}$ d. per lb.; shipment, 2s. 8 $\frac{1}{4}$ d., e.i.f.

COCHINEAL. — Silver-grey Peruvian quoted 6s. 6d. per lb., e.i.f.; Canary Isles black-brilliant, 18s. 6d.; silver-grey, 15s. 6d., spot.

FRANGULA. — Spot is 105s. per cwt.

GENTIAN. — French is 170s. per cwt. on the spot.

GINGER. — Africane, 100s. per ewt. on the spot; new crop for shipment, 87s., e.i.f. Jamaican No. 3 on the spot is 280s. per cwt.

GUM ACACIA. — Kordofan cleaned sorts are 140s. per ewt. on the spot; October shipment, 128s. 6d., e.i.f.

HONEY. — Australian light-amber is 113s. to 117s. and medium amber 102s. 6d. to 107s. 6d. Argentine, 130s. to 135s.; Jamaican 135s. to 140s.; New Zealand clover, 160s. to 170s.; all per cwt. on the spot.

IPECACUANHA. — Matto Grosso, 57s. 6d. per lb., spot, limited supplies; shipment, no offers. Colombian shipment quoted at 56s., e.i.f. and near-at-hand, 57s. 6d.; Costa Rican, 66s., e.i.f., for shipment.

KOLA NUTS. — Jamaican are offered at about 8d. per lb. spot, and 7d., e.i.f. Africane 5d. to 5 $\frac{1}{4}$ d. spot and 4d., e.i.f.

LANOLIN. — ANHYDROUS, B.P., is from 170s. to 175s. per ewt. in 1-ton lots and HYDROUS, B.P., 150s., free drums, delivered.

LIQUORICE. — Natural root: Persian on the spot is 47s. 6d.; for shipment, 42s. 6d., e.i.f., per ewt. Block juice: Anatolian, 200s. to 210s. per cwt., as to quantity. Italian stick from 310s. to 476s. per ewt. Spray-dried extract, 2s. 10 $\frac{1}{4}$ d. per lb.

LOBELIA HERB. — Spot offers of American are 4s. 6d. per lb. and for shipment,

3s. 9d., e.i.f. Duteh, 3s. 3d., e.i.f. for shipment.

MENTHOL. — Chinese is 52s. 6d. per lb., duty paid and 47s. 6d., e.i.f.; Brazilian, spot, 37s., duty paid, shipment, October–November, 34s., e.i.f. Formosan for shipment, 36s., e.i.f.

MERCURY. — Price per flask (76 lb.) is £79 on the spot.

ORRIS ROOT. — Florentine is 330s. per ewt.

PAPAIN. — Shipment (e.i.f.) value is 25s. per lb. for East African grade one.

PEPPER. — White Sarawak spot, 2s. 6 $\frac{1}{4}$ d. per lb.; October–November shipment, 2s. 5 $\frac{3}{4}$ d., e.i.f.; Black Sarawak spot, 1s. 6 $\frac{1}{2}$ d.; October–November shipment, 1s. 6 $\frac{3}{4}$ d., e.i.f. Black Malabar quoted at 212s. 6d. per cwt. on spot; new-crop for December–January shipment, 192s. 6d., e.i.f.

PIMENTO. — Spot value is 585s. per ewt.

QUASSIA. — Chips on spot are offered at 55s. per ewt.

RAUWOLFIA. — *Canescens*, 2s. per lb., e.i.f.; *Vomitoria*, 2s. 3d., e.i.f.; *Serpentina*, 6s., e.i.f. asked.

RHUBARB. — Chinese small to medium offering from 6s. to 7s. 6d. per lb., as to quality. Best grades not available on spot.

SAFFRON. — Spanish is quoted at 230s. per lb.

SARSAPARILLA. — Jamaican native red on the spot is 2s. 9d. per lb. Shipment, not offering.

SEEDS. — (Per ewt.). **ANISE.** — Spanish, 165s., duty paid. **CARAWAY.** — Dutch unchanged at 90s., duty paid. **CELERY.** — Indian, 177s. 6d. to 180s. spot; shipment quoted at 137s. 6d., e.i.f. **CORIANDER.** — Morocean, 60s., duty paid; shipment, 41s., e.i.f. quoted. **CUMIN.** — Cyprian is dearer at 250s. spot and Iranian at 230s., in bond (250s., duty paid). **DILL.** — Indian, 70s. spot; shipment, 58s. 6d., e.i.f. **FENNEL.** — Chinese, 157s. 6d., duty paid (137s. 6d. in bond); Indian, 175s. **FENUGREEK.** — Morocean, 47s., duty paid. **MUSTARD.** — English, 80s. for medium quality.

SENEGA. — Spot sold at 14s. per lb., market now reported bare; shipment, 13s. 9d. to 14s. 6d., e.i.f.

SENNA. — *Tinnevelly* LEAVES, prime No. 1, 1s. 5d. per lb., f.a.q., No. 3, 10d. PODS, manufacturing short at 1s. 6d. and hand-picked, 2s. 1d. to 2s. 4d. *Alexandria* pods: Manufacturing, offered from 1s. 6d. with hand-picked from 5s. to 6s.

SLIPPERY ELM. — Grinding quality bark is 2s. 7d. per lb.

STRAMONIUM. — Indian LEAVES are 70s. per ewt., and European 80s. on the spot.

SQUILL. — White is quoted at 80s. per ewt. on the spot.

TONQUIN BEANS. — Para on the spot are offered at 8s. per lb. Shipment, 7s. 6d., e.i.f.

TRAGACANTH. — No. 1 ribbon is £115 to £120 per ewt., No. 2, £105 to £110.

TURMERIC. — Madras finger is 60s. on the spot; shipment, 60s. to 61s., e.i.f. quoted.

VALERIAN ROOT. — Spot: Indian (with rootlets) is 130s. and Belgian, 175s. to 195s. per ewt. Duteh (max. 2 $\frac{1}{2}$ per cent. sand) for prompt shipment, 168s., e.i.f.

VANILLIN. — Rates (per lb.) are now:— 5-ewt. lots, 25s. 3d.; 1-cwt., 25s. 6d.; 50-lb., 25s. 9d.; smaller quantities, 26s.

WAXES. — (Per cwt.). **BEES'** — Dar-es-Salaam, spot, 525s. nominal; shipment, 460s., e.i.f. Abyssinian, spot, 470s. in bond; shipment, 445s., e.i.f. Benguela spot, 520s., duty paid; shipment, 460s., e.i.f. **CANDELILLA.** — Spot, 460s. **CARNAUBA.** — Fatty grey, spot, 560s.; for shipment, 450s., e.i.f. Prime yellow, spot, 970s.; shipment, 945s., e.i.f.

Essential and Expressed Oils

ANISE. — Chinese, 8s. per lb., spot; shipment, 7s. 9d., e.i.f.

BAY. — West Indian is 12s. 6d. per lb. on the spot.

BERGAMOT. — Spot supplies are from 86s. 6d. per lb.

CAFE. — Spanish is 2s. 6d. per lb. for drum lots.

CAJUPUT. — Spot supplies are from 10s. per lb.

CANANGA. — Spot is from 47s. 6d. to 50s. per lb.

CARAWAY. — English-distilled is offered at 55s. and imported 26s. 6d. per lb.

CARDAMOM. — Price per lb. is from 350s. for English-distilled and 267s. 6d. for imported.

CLOVE. — Madagascan leaf, 7s. 3d. per lb., duty paid nominal; shipment, 6s. 4d., e.i.f. Rectified 87–88 per cent., 9s. 3d. Distilled bud oil, English, B.P., 26s. 6d. to 27s. 6d.

GERANIUM. — Bourbon is 135s. per lb. on the spot and 132s. 6d., e.i.f. Algerian, 100s.

LAVANDIN. — Spot is from 10s. to 12s. 6d. per lb. for original drums.

LAVENDER. — French oil, 40–42 per cent. is at 50s. per lb.

LAVENDER SPIKE. — Spanish is at 16s. 6d. to 17s. 6d. per lb. for original drums.

LEMON. — Sicilian is 30s. per lb. for machine-pressed on the spot and 47s. 6d. for hand-pressed. Californian for shipment, 25s. to 28s. 6d., e.i.f.

LIME. — West Indian distilled is in the region of 58s. 6d. per lb. on the spot.

NUTMEG. — Imported B.P. oil is about 92s. 6d. per lb. English-distilled, 142s. 6d. as to quantity.

ORANGE. — Spot quotations of sweet oil include Floridian at 12s. 6d. per lb.; Californian, 15s.; West Indian, 12s.; West African, 24s. 6d.; Israeli, 16s. 6d. For prompt shipment, Californian cold-pressed U.S.P., 16s. 9 $\frac{1}{2}$ d., e.i.f.; distilled, 6s. 5d., e.i.f. Terpeneless is 200s. per lb., spot.

PENNYROYAL. — Spot is quoted from 17s. per lb., duty paid.

PEPPERMINT. — *Arvensis*: Chinese is 24s. 9d. per lb. on the spot nominal and 22s., e.i.f. Brazilian, 8s. 3d., spot and 7s. 9d., e.i.f. Formosan, 15s. 3d., spot; new-crop for October shipment, 12s. 6d., e.i.f. *Piperita*: Italian "Miteham"-type, from 42s. 6d. to 50s.; American, 27s. 6d. to 30s., as to origin.

PETITGRAIN. — Paraguay is offered at 18s. per lb. on the spot; 16s. 9d., e.i.f.

PIMENTO. — English-distilled berry is 180s. per lb.; imported, 77s. 6d. Rectified leaf, 27s. 6d. per lb. for small lots.

ROSEMARY. — Spanish is 8s. 6d. per lb. on the spot for best quality.

RUE. — Spanish is 25s. per lb. on the spot.

SAGE. — Spanish is 9s. 9d. per lb.; Dalmatian, 37s. 6d.

SANDALWOOD. — Mysore offered from 77s. 6d. to 80s. per lb. as to source. East Indian, 80s., spot.

SASSAFRAS. — Brazilian is from 3s. 6d. per lb., duty paid.

TANGERINE. — Hand-pressed is 55s. per lb. and machine-pressed, 42s. 6d., spot.

VETIVERT. — Spot is currently at about 87s. 6d. per lb.

UNITED STATES REPORT

NEW YORK, OCTOBER 7: Hungarian CHAMOMILE FLOWERS were virtually unobtainable while Roman flowers were easier at \$2.25 per lb. Among ESSENTIAL OILS, PATCHOULI was down 5 cents to \$4.25 per lb. and SPEARMINT up 25 cents to \$6.85.

TRADE MARKS

APPLICATIONS ADVERTISED
BEFORE REGISTRATION

From the "Trade Marks Journal," September 24

For pharmaceutical preparations for the treatment of leprosy (5)

VADRINE, 778,393, by Ed. Geistlich Söhne, A.G., für Chemische Industrie, Wohlhusen, Switzerland.

For all goods (5)

MIDIKEI, 773,615, by Parke, Davis & Co., Detroit, Michigan, U.S.A., and Hounslow, Middlesex. ENCHOL, B774,276, by A. & G. Nicholas, Ltd., Slough, Bucks. STAYCEPT, 776,384, by Stayne Laboratories, Ltd., Wokingham, Beds. AVIPRIN, 777,119, by May & Baker, Ltd., Dagenham, Essex. LIGNOSTAB, 778,136, by Boots Pure Drug Co. Ltd., Nottingham.

For all goods but not including medicated toilet paper or any goods of the same description as medicated toilet paper (5)

SALUDAX, 777,414, by Imperial Chemical Industries, Ltd., London, S.W.1.

COMMERCIAL TELEVISION

PROGRAMME details are given to enable chemists to put in linking-up displays if they wish. Notice given is as far in advance of the programme date as can be guaranteed by the broadcasting companies. Where known, the number of appearances of the product during the week is shown in parentheses.

October 19-25

LONDON

Ajax. Airwick. Alka-Seltzer. Aspro (4). Azymil (3). Beecham's pills (3), powders (4). Bristow's lanolin shampoo (2). Cadum soap (2). Carter's little liver pills (3). Colgate's tooth-paste (3). Damaskin. Delrosa rose-hip syrup (2). Digestif Rennies. Diuromil.

Euthymol tooth-paste. Flit air freshener (2). French's bird food (2). Fresh-Aire (2). Gale's honey (2). Gleem tooth-paste. Gillette razors and blades (2). Heath and Heather herbal products. Horlicks (6). Ingram's shaving cream (2). Iron Jelloids. Kleenex tissues (2). Knight's Castile soap (8). Loxene shampoo (3). Lucozade (4).

Mac throat sweets. Maclean's indigestion tablets (2), tooth-paste. Max Factor toilet preparations. Milk of Magnesia (2), tablets. Moorland indigestion tablets (2). Nervone (3). Penetrol inhalant. Phenasic (3). Phosferine (3). Pond's toilet preparations. Punch and Judy tooth-paste. Ribena (2). Rinstead pastilles. Rosemary shampoo. Rosedale products.

Sebbix shampoo (3). Silvikrin shampoo (2), hair cream (2). Scotties (3). Supavite (2). Sprinkleen (2). Thru. Trojan. Trugel (3). Valderma. Veno's cough cure (4). Yeast-Vite.

MIDLANDS

Ajax. Airwick. Alka-Seltzer (2). Aspro (6). Azymil (3). Beecham's powders (4). Bristow's lanolin shampoo (3). Cadum soap (2). Carter's little liver pills (3). Californian syrup of figs. Colgate's tooth-paste (2). Cutex "Stay-fast" lipstick. Delsey (2). Delrosa (2). Digestif Rennies (2). Diuromil.

Euthymol tooth-paste. Fenning's little healers. Flit air freshener (2). French's bird food (2). Fresh-Aire (2). Germolene. Gleem tooth-paste. Gillette razors and blades (2). Hilton (2). Horlicks (2). Iron Jelloids (4). Kleenex tissues (2). Knight's Castile soap (7). Lantigen B. Loxene hair cream, shampoo (3). Lucozade (3).

Mac throat sweets. Maclean's indigestion tablets (2), tooth-paste. Max Factor toilet preparations (2). Milk of Magnesia tablets. Moorland indigestion tablets (2). Penetrol inhalant. Phenasic (3). Pond's toilet preparations. P.I.J. (3). Ribena (5). Rosedale products.

Sanatogen. Sebbix shampoo. Silvikrin shampoo (2), hair cream (2). Scotties (2). Supavite. Thru (2). Trojan. Trugel (3). Veno's cough cure (4). Vosene. Yeast-Vite.

NORTH

Ajax. Airwick (2). Alka-Seltzer. Aspro (8). Azymil (3). Beecham's pills (4), powders (4). Bristow's lanolin shampoo (3). Cadum soap (2). Californian syrup of figs. Cephos (4). Colgate's tooth-paste (2). Delrosa rose-hip syrup. Dento (2). Digestif Rennies.

Fenning's little healers. Flit air freshener (2). French's bird food (2). Fresh-Aire (2). Germolene. Gleem tooth-paste. Gillette razors and blades (2). Horlicks (2). Kleenex tissues (2). Knight's Castile soap (7). Lantigen B. Loxene shampoo (3). Lucozade (4).

Mac throat sweets. Maclean's indigestion tablets (2), tooth-paste. Max Factor toilet preparations. Mentholatum. Milk of Magnesia tablets. Moorland indigestion tablets (2). Penetrol inhalant. Phenasic (3). Phosferine (3). Phyllosan (3). Pond's toilet preparations. Punch and Judy tooth-paste. Ribena (3).

Sanatogen. Sebbix shampoo. Setlers (3). Silvikrin shampoo (2), hair cream (2). Scotties (2). Supavite (2). Thru. Trojan. Trugel (2). Valderma (4). Veno's cough cure (4). Vosene. Yeast-Vite (2).

SCOTLAND

Alka-Seltzer (2). Askit (7). Aspro (9). Beecham's pills (3), powders (4). Bristow's lanolin shampoo (2). Cadum soap (4). Colgate's tooth-paste. Delrosa rose-hip syrup (2). Digestif Rennies (3).

French's bird food (2). Gleem tooth-paste. Gillette razors and blades (2). Horlicks (2). Kleenex tissues (3). Knight's Castile soap (8). Lantigen B. Loxene shampoo (3). Lucozade (4).

Mac throat sweets. Maclean's indigestion tablets tooth-paste. Max Factor toilet preparations. Milk of Magnesia, tablets (2). Moorland indigestion tablets. Palmolive soap. Penetrol inhalant. Phenasic (3). Phosferine. Phyllosan (3). Ribena (2). Rosedale products.

Sebbix shampoo (2). Silvikrin pure, shampoo, hair cream (2). Scotties (3). Thru. Trojan. Trugel (2). Veno's cough cure (3). Vosene. Yeast-Vite.

WALES

Alka-Seltzer (2). Amami wave set (3). Aspro (7). Beecham's pills (3), powders (4). Bristow's lanolin shampoo (4). Cadum soap (5). Colgate's tooth-paste. Delrosa rose-hip syrup (2). Digestif Rennies (3). Diuromil (2). Dr. Wernet's powder (2).

French's bird food (2). Fresh-Aire (2). Gleem tooth-paste. Gillette razors and blades (2). Hilton (2). Horlicks (2). Kleenex tissues (3). Knight's Castile soap (6). Lantigen B. Loxene shampoo (3). Lucozade (4).

Mac throat sweets. Maclean's indigestion tablets (2), tooth-paste. Max Factor toilet preparations. Milk of Magnesia (2). Moorland indigestion tablets. Palmolive soap. Phyllosan (3). Punch and Judy tooth-paste. Ribena (2). Rosedale products.

Sebbix shampoo. Silvikrin pure, shampoo (2), hair cream (2). Thru. Trojan. Valderma (6). Veno's cough cure (4). Yeast-Vite. Zoflora (2).

SOUTH

Airwick. Ajax. Aspro (7). Cadum soap (2). Colgate tooth-paste.

Fenning's little healers. French's bird food (2). Gleem tooth-paste. Gillette razors and blades (2). Horlicks (2). Lantigen B. Loxene shampoo (3). Lucozade (4).

Max Factor toilet preparations. Milk of Magnesia (2). Moorland indigestion tablets. Palmolive soap.

Silvikrin pure, shampoo (2), hair cream (2). Scotties (2). Thru.

COMING EVENTS

Items for inclusion under this heading should be sent in time to reach the Editor not later than first post on Wednesday of the week of insertion.

Monday, October 13

BIRKENHEAD and WIRRAL PHARMACISTS' ASSOCIATION and BRANCH, Pensby hotel, at 8 p.m. Captain A. H. Finney on "Guide Dogs for the Blind."

FINCHLEY BRANCH, PHARMACEUTICAL SOCIETY, Bull and Butcher, Whetstone, London, N.20, at 8 p.m. Dr. J. Davoll on "Chemotherapy of Cancer."

LONDON NURSING EXHIBITION, Seymour Hall, Seymour Place, London, W.1. (Until October 17.)

Tuesday, October 14

NORTH LONDON PHARMACEUTICAL ASSOCIATION and BRANCH, Balc's restaurant, Holloway Road, London, N.7, at 7.45 p.m. Mr. O. H. Waller (Editor, THE CHEMIST AND DRUGGIST) on "Blue Pencil."

PRESTON PHARMACISTS' ASSOCIATION, Country club, Winckley Square, at 7.45 p.m. Talk by Mr. A. J. Gray (consultant anaesthetist, Preston Royal Infirmary).

SOUTH-EAST METROPOLITAN BRANCH, PHARMACEUTICAL SOCIETY and SOUTH-EAST LONDON CHEMISTS' ASSOCIATION, New Cross inn, 323 New Cross Road, London, S.E.14, at 8 p.m. Film show; report on Llandudno British Pharmaceutical Conference.

Wednesday, October 15

EAST METROPOLITAN BRANCH, PHARMACEUTICAL SOCIETY, Swan hotel, Stratford Broadway, at 8.15 p.m. Members' cine films; report on Llandudno British Pharmaceutical Conference.

LONDON SECTION, ROYAL INSTITUTE OF CHEMISTRY, King's College, Strand, London, W.C.2, at 7 p.m. Professor R. L. Wain on "Systemic Fungicides."

MANCHESTER PHARMACEUTICAL ASSOCIATION, pharmacy department, Manchester University, at 3.30 p.m. Distribution of prizes.

NOTTINGHAM BRANCH, PHARMACEUTICAL SOCIETY, George hotel, George Street, at 7.30 p.m. Sir Hugh Linstad (a secretary of the Society) on "Personal Relations in the Health Service."

THAMES VALLEY PHARMACISTS' ASSOCIATION, Griffin hotel, Market Place, Kingston-on-Thames, at 7 p.m. Supper-dance.

WESTERN [LONDON] PHARMACISTS' ASSOCIATION and CHELSEA SCHOOL OF PHARMACY, Chelsea College of Science and Technology, Manresa Road, London, S.W.3, at 7.45 p.m. Dr. A. H. Beckett (reader in pharmaceutical chemistry, Chelsea School of Pharmacy) on "Impressions of Pharmacy in America Today."

Thursday, October 16

BRITISH INTERPLANETARY SOCIETY, B.M.A. House, Tavistock Square, London, W.C.1. Symposium on "Space Medicine."

BURNLEY BRANCH, PHARMACEUTICAL SOCIETY, Cross Keys hotel, St. James Street, at 7.45 p.m. Mr. H. E. Dale (Boots Pure Drug Co., Ltd.) on "Some Recent Advances in Medicine."

CHEMICAL SOCIETY, Imperial College of Science and Technology, South Kensington, London, S.W.7, at 7.30 p.m. Centenary lecture: Dr. G. Herzberg on "Spectra of Free Radicals."

DUNDEE and EASTERN SCOTTISH BRANCH, PHARMACEUTICAL SOCIETY, Steeple club rooms, Nethergate, at 7.30 p.m. Mr. E. N. Black on "A Camera Calendar in Colour."

LEEDS BRANCH, NATIONAL PHARMACEUTICAL UNION, and LEEDS and BRADFORD BRANCH, PHOTOGRAPHIC DEALERS' ASSOCIATION, Griffin hotel, Boare Lane, Leeds, at 7.30 p.m. Talk by Mr. Randall Cox (president, Photographic Dealers' Association); buffet supper.

NOTTINGHAM BRANCH, NATIONAL ASSOCIATION OF WOMEN PHARMACISTS. Visit to Portland Training College for the Disabled. Particulars from Mrs. M. Wilkinson, 84 Elvaston Road, Nottingham.

Friday, October 17

BRITISH INTERPLANETARY SOCIETY, B.M.A. House, Tavistock Square, London, W.C.1. Symposium on "Space Medicine." At the Waldorf hotel, London, W.C.2, at 7.30 p.m., twenty-fifth anniversary dinner.

EDINBURGH and SOUTH-EASTERN SCOTTISH BRANCH, PHARMACEUTICAL SOCIETY, 36 York Place, Edinburgh, at 7.45 p.m. Mr. R. R. Gillies, M.B.,

Ch.B., D.P.H., on "Bacterial Fimbriae, their occurrence, nature and significance."

Advance Information

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN, 17 Bloomsbury Square, London, W.C.1, at 7.30 p.m., on October 22, Dr. A. H. Beckett (reader in pharmaceutical chemistry, Chelsea College of Science and Technology) on "Pharmaceutical Research in the United States."

ROYAL INSTITUTE OF CHEMISTRY, Royal Institution, 21 Albemarle Street, London, W.1, at 5.45 p.m., on November 17, Meldola medal lecture; Dr. D. J. Manners on "Recent Advances in the Structural Analysis of Polysaccharides."

C. & D. WEEKLY LIST OF PRICES

A = Advanced; R = Reduced; I.R.P. = Inclusive Retail Price; * = Tax 30 per cent.; ‡ = Tax 60 per cent.

BOOTS PURE DRUG CO., LTD. (from October 1)
Viutes lobeline hydrochloride, B.P.C., gr. 1/20, 3 mgm. per mil Each I.R.P. 4 10 7 3 R
(from October 7)
Hepastab ampoules 2 mils 3 2 6 3 9 A

KODAK, LTD. (from September 22)
Kodashide table projector accessory chute 159 0 R
(from October 20)
Brownie movie camera model II 15 0 R 334 7 R

PHARMACEUTICAL SPECIALITIES (MAY & BAKER), LTD. (to trade from October 13; to public from November 10)
Amargyl tablets 50 9 0 R 500 82 6 R
Protamyl tablets 50 5 9 R 500 52 6 R
Sonergan tablets 50 8 3 R 500 75 0 R

SMITH & NEPHEW, LTD. (from November 3)
Blue Velvet hand lotion‡ 9 9 1 8 R 15 6 2 8 R
Nivea creme soap* 6 0 9 R

VITAMINS, LTD. (from October 15)
Orovite elixir 6 oz. 80 0 10 0 R 40 oz. 35 0 52 6 R
tablets 25 80 0 10 0 R 100 276 0 34 6 R
Each 500 107 4 161 0 R

P.A.T.A. LIST

(Alterations notified this week by the Proprietary Articles Trade Association.)

ELLIMAN SONS & CO., LTD. (from October 1)
Elliman's Fibro cream* 24 3 3 6 R

GLAXO LABORATORIES, LTD. (tax exemption)
Calci Ferrum tablets 100 15 9 1 9 R

SCRAM PRODUCTS, LTD.
Puff'em insect killer 2 oz. 16 0 1 0 A

NEW PRODUCTS AND PACKS

LONDON COMMERCIAL ELECTRICAL STORES, LTD.
Soltanette sun lamp 50 0 chromiuni-plated stand 5 0

PERIHEL, LTD.
"Super" Actinea 59 sun lamp 315 0

ALLEN & HANBURYS, LTD.
Fentazin tablets Each 2 mgm. 50 3 4 5 0 500 30 0 45 0
4 mgm. 50 6 4 9 6 500 57 0 85 6
8 mgm. 50 12 0 18 0 500 108 0 162 0
injection 5 x 1 c.c. ampoules 4 0 6 0

ARMOUR LABORATORIES (ARMOUR CHEMICAL INDUSTRIES, LTD.)
Gastrolav capsules 7 mgm. 12 40 0

Tryptar ointment 5 gm. 8 4 12 6

BENGUE & CO., LTD. Plus-Prin* 20 Doz. 14 0 1 9

CRYSTAL PRODUCTS, LTD. Outdoor Girl "Nail Magic" 2 6

de luxe lipstick regular lipstick 2 6 1 3

FASSETT & JOHNSON, LTD. Nestle Soft Spraze‡ 37 2 6 6

PHARMACEUTICAL SPECIALITIES (MAY & BAKER), LTD. Planidets 2 6

C. & D. RETAIL AND DISPENSING PRICE LIST

The drug index for September was 206.8

Cost		Item	16 oz.	4 oz.	1 oz.	1 dr.
d.	per		s. d.	s. d.	s. d.	s. d.
48	500 gm.	Areca pulv. ...	—	1 7	0 5½	0 1
27	500 gm.	Bentonit., B.P.C. ...	—	0 10½	0 3	—
75	25 gm.	Butylchloral. hydras P.I. (8)	—	—	—	1 7
43	25 gm.	Caffeina et sodii benzoas ...	—	—	—	0 10½
108	500 gm.	Camphora, natural ...	—	3 6	1 1	0 2
31	25 gm.	Chlorocresol ...	—	—	4 5	0 7½
109	500 mils	Ext. casc. sagr. liq. ...	—	3 6	1 1	0 2
363	100 mils	Ext. ipecac. liq. ...	—	—	—	2 2
67	100 mils	Ext. taraxaci liq. ...	—	—	—	0 5
120	2 kilos	Gelatum alumin. hydrox. ...	3 5	0 11½	0 3½	—
36	0.5 gm.	Homatropina, B.P.C. S.1 (4) per gr.	—	0 9	—	—
45	25 gm.	Iodoformum ...	—	—	6 5	0 11
75	100 gm.	Iodium ...	—	—	3 4	0 5
66	500 mils	Linct. methadon., N.F. S.1 D.D.	—	2 1	0 7½	0 1
132	250 mils	Liq. bromid. co., B.P.C. '49 S.1 (5)	—	8 6	2 6	0 4
87	500 mils	Liq. quin. ammon., B.P.C. ...	—	2 10	0 10	0 1½
36	25 gm.	Lithii carbonas, B.P.C. '49 ...	—	5 1	0 8½	—
120	2 litres	Lotio calamin. oleos., B.P.C. ...	3 5	0 11½	0 3½	—
32	500 gm.	Magnes. carb. lev. ...	—	1 0	0 3½	—
96	500 mils	Methyl. salicylas ...	—	3 1	0 11	0 1½
32	25 gm.	Ol. anisi ...	—	—	4 6	0 7½
53	25 gm.	Ol. pini sylvestris ...	—	—	6 6	0 11
174	500 gm.	Ol. theobromatis ...	—	5 7	1 8	0 3
38	25 gm.	Pancreatinum ...	—	—	5 5	0 9½
57	500 mils	Pig. magenta, B.P.C. ...	—	1 10	0 6½	0 1
108	250 gm.	Pimentæ pulv. ...	—	—	2 1	0 3½
38	100 gm.	Piper. alb. pulv. ...	—	—	1 8	0 3
204	500 gm.	Potassii iodidum ...	—	6 7	2 0	0 3½
58	100 gm.	Pulv. cretæ aromat. c. opio S.1 (5) ...	—	—	2 6	0 4
34	500 gm.	Sapo mollis ...	3 10	1 1	0 4	—
96	500 gm.	Sodii hydrox. (sticks) ...	10 11	3 1	0 11	0 1½
38	25 gm.	Sodii iodidum ...	—	5 5	0 9½	—
29	500 mils	Spt. chirurgicalis, B.P.C. ...	3 3	0 11	0 3½	—
51	100 gm.	Sulphanilamid. ... S.1 R only	—	—	2 2	0 3½
92	2 litres	Syrupus ...	—	0 9	0 2½	—
114	500 mils	Tinct. aconiti, B.P.C. '49 S.1 (5)	—	3 8	1 1	0 2
153	500 mils	Tinct. benzoin. co. ...	—	4 11	1 6	0 2½
96	500 mils	Tinct. gelsemii, B.P.C. P.I. (9)	—	3 1	0 11	0 1½
84	500 mils	Tinct. hyoscyami ...	—	2 8	0 10	0 1½
243	500 mils	Tinct. ipecacuanhae ...	—	7 9	2 4	0 4
156	500 mils	Tinct. zingiberis fort. ...	—	5 0	1 6	0 2½
188	2 kilos	Ung. calaminæ, B.P.C. ...	5 4	1 6	0 5½	—
63	500 gm.	Ung. emulsificans ...	—	2 0	0 7½	0 1

Cost		TABLETS	Retail (in container)	
d.	per		25	100
120	1,000	Aneurin co. N.F. ...	1 1	2 8
372	1,000	Aneurin co. fort. N.F. ...	2 0	6 4
84	1,000	Ephedrin. hydrochlor. gr. ¼ P.I. (13)	0 9	1 10
82	100	Folic acid 5-mgm., B.P.C. ...	3 7	12 0
69	1,000	Glyceryl. trinitrat. gr. 1/130 P.I. (13)	0 10	1 11
448	1,000	Phenobarb. et theobrom., B.P.C. S.1 R only	2 3	7 5
78	1,000	Sodii citrat. gr. 2 ...	0 9	1 9
123	1,000	Sodii citrat. gr. 5 ...	0 10½	2 4
CAPSULES				
180	1,000	Halibut liver oil, B.P.C. ...	1 3	3 6
550	250	Sandalwood oil min. 5 ...	8 7	33 0
418	100	Sandalwood oil min. 10 ...	15 10	60 11
240	1,000	Vitamins, B.P.C. ...	1 6	4 5

The bold letters and figures at left of dispensing price relate to the classification of poisons in THE CHEMIST AND DRUGGIST Poisons Guide.

NEW ADULT COUGH LINCTUS OUT-SOLD ALL BRANDS IN COVENTRY

BIGGEST-EVER NATIONAL PRESS ADVERTISING STARTING NOW

Vick's new Formula 44 Cough Linctus—specially formulated for adults—will be launched nationally next week and backed by the heaviest press advertising campaign ever given to any cough remedy in this country.

This amazing product was test marketed in Coventry last winter, and within a few weeks of its introduction jumped right into the lead of all cough remedies. It remained the fastest-selling line throughout the winter!

"We knew we had a winner," says

Mr Paul Corbould, Managing Director. "Similar results were reported from Australia where we tested a similar formula, name and advertising. Our most optimistic estimates were twice revised—and twice surpassed."

The secret? A product that really demonstrates itself. Formula 44 does just what it promises to do—gives "deep, long-lasting cough relief that lasts the whole night through".

The formula contains demulcents, expectorants, Ephedrene Sulphate,

Morphine Hydrochloride and Cetamium (Cetylpyridinium Chloride). It has a pleasant taste and promotes a delightful sensation of warmth.

Survey results

A survey of consumers reveals most remarkable results. More than 95 per cent thought Formula 44 better than anything previously used.

"Instant relief after nights of coughing" . . . "The only relief after everything else had failed" . . . "Never known anything so good" . . . are typical consumer comments.

Trade reaction, too, has been encouraging. "I feel that your Formula 44 has shown by its success that, not only is there a real need for this product, but also shows the goodwill your Company has built up with the general public," writes one leading Coventry pharmacist.

"I can think of a dozen new lines but certainly cannot remember one with such phenomenal sales as Vick Formula 44"—writes another, the Managing Director of a small local 'chain'.

"Display helped us enormously in Coventry," says Mr Corbould. The three-bottle display unit, pictured on this page, was widely used on counters and in shop windows.

This compact, distinctive display was sent to Coventry chemists with three free bottles in every two dozen container.

National launch

Now Formula 44 has been distributed nationally. The introductory bonus of three bottles free with two dozen ensures an attractively high profit margin.

Vick Formula 44 Cough Linctus is available, of course, only to registered pharmacists.

Striking display unit containing THREE FREE bottles—sent with every two dozen container



new adult-strength cough linctus for people who want a good night's sleep

When stomach, irritating coughs keep you awake at night...
and special treatment ordinary remedies do not enough... try...
the deep, long-lasting relief that Vick's new adult-strength Formula 44
adult-strength cough linctus gives.

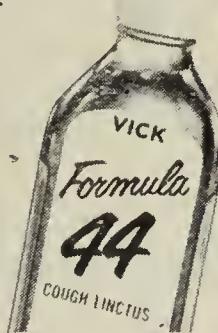
This amazingly powerful new treatment gives rapid and effective
cough relief. It helps break up thick mucus & sooths sore throat
so that you'll sleep the whole night through.

Use of adult-strength Formula 44 gives you the restorative
treatment you need. You'll feel a peaceful night's sleep is right around the corner.
Promise to get at least 8 hours of comfortable sleep—undisturbed by coughs.
Then you'll wake up feeling refreshed & ready to face the day.
It's much better than 1 or 2 cups of tea.

ASK FOR **Formula 44**

A PRODUCT OF VICK RESEARCH

This advertisement—scaled down here—is part of the heaviest
press campaign ever given to any cough remedy in this country





STERILE PACKS FOR SURGICAL DRESSINGS

Johnson & Johnson have now introduced a range of pre-sterilised and sterile packed pharmaceutical dressings for home use—in the most popular, best-selling home sizes. The dressings are maintained in perfect sterilised condition until the moment the pack is opened.

COTTON WOOL BPC 1 oz. and 2 oz.

ABSORBENT LINT BPC 1 oz. and 2 oz.

W.O.W. BANDAGES BPC 1" X 3 yds · 2" X 4 yds.

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Products include*

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Plastic and Elastic
First Aid Dressings

Johnson's Non-Sting
Baby Shampoo

Modess
Personal Products

Johnson's
First-Aid Cream

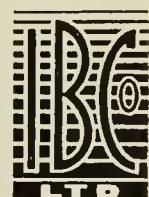
Johnson's
Foot Powder

STERILE PACKS—ANOTHER PROFITABLE



*Johnson & Johnson
DEVELOPMENT*

THE WORLD'S MOST TRUSTED NAME IN SURGICAL DRESSINGS



*Bottles
of
Quality*

... Perfumery, Cosmetics
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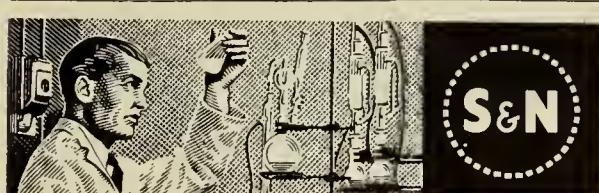
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2½-oz., 5-oz. and 10-oz.

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Nos. 1 to 7½ sizes.

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Tall and Semi-squat.

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May & Baker Ltd. May we quote you?

CODEINE PHOSPHATE B.P. SPECIAL TABLETTING GRADE,

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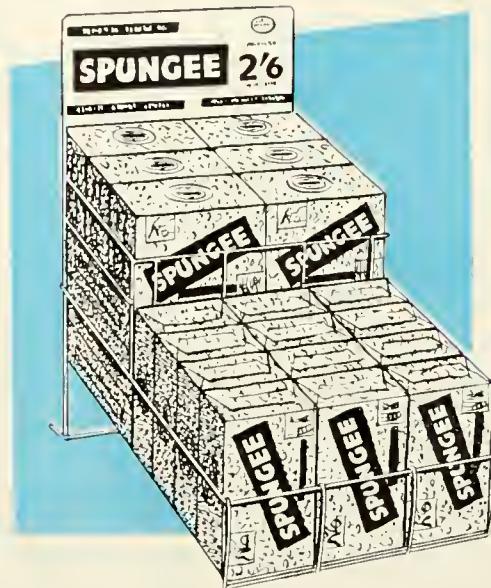
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VASCULIT*

VASCULIT

1-(4-oxy-phenyl)-1-oxy-2-n-butylamino-ethane sulphate

Vasculit—new to this country—presents a valuable adjuvant to treatment in all cases where increased peripheral blood flow would be beneficial.

Its action is immediate and free from the side-effects normally experienced with conventional treatment. It can be used: **In acrocyanosis, "cold hands and feet"—In post-thrombotic conditions—In the treatment of indolent ulcers of the leg—Headaches and cerebral symptoms associated with essential hypertension and arteriosclerosis.**

Obtainable in tablet form and as a liquid in special dropper bottles ensuring versatility and flexibility of dosage.

More and more doctors will be prescribing Vasculit as a result of information which is being widely publicised. In the doctor's, his patient's and in your own interests, please ensure that you carry adequate stocks.



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DRUM MIXER

*For mixing dry powders,
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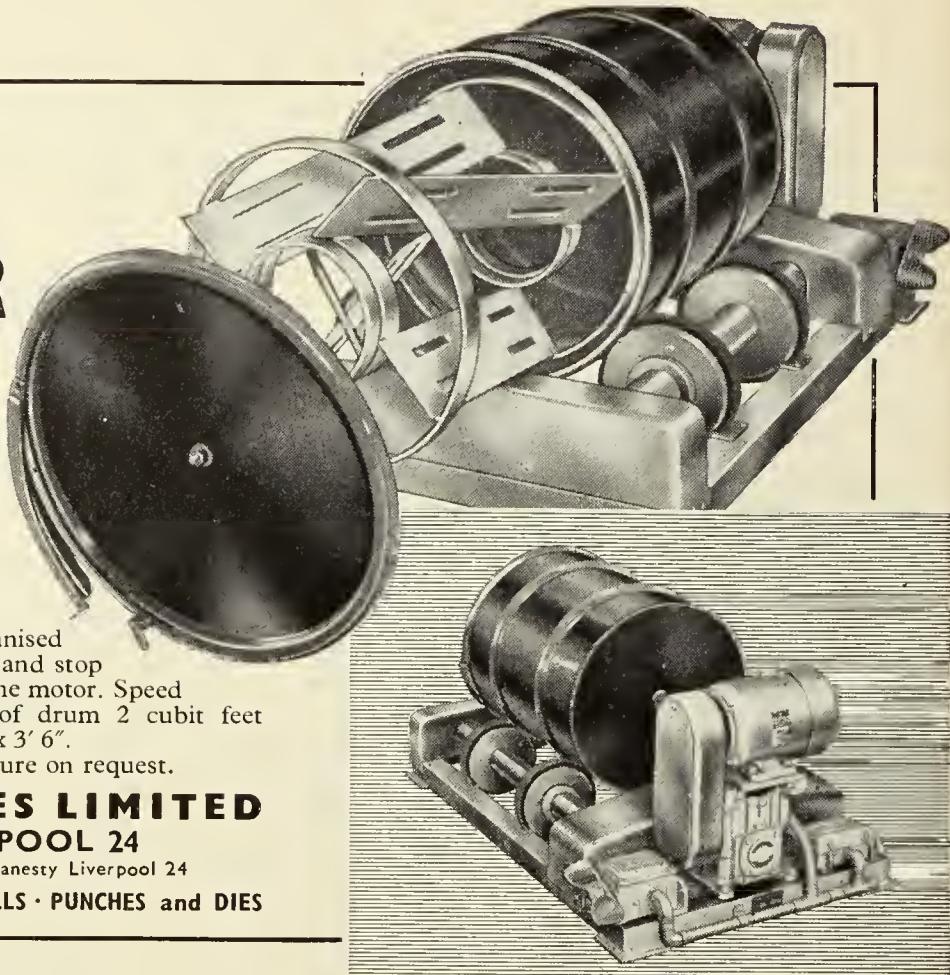
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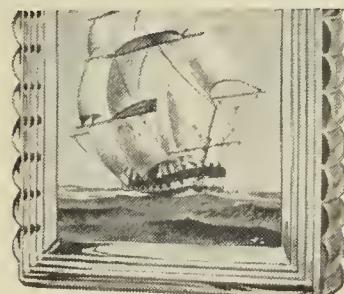


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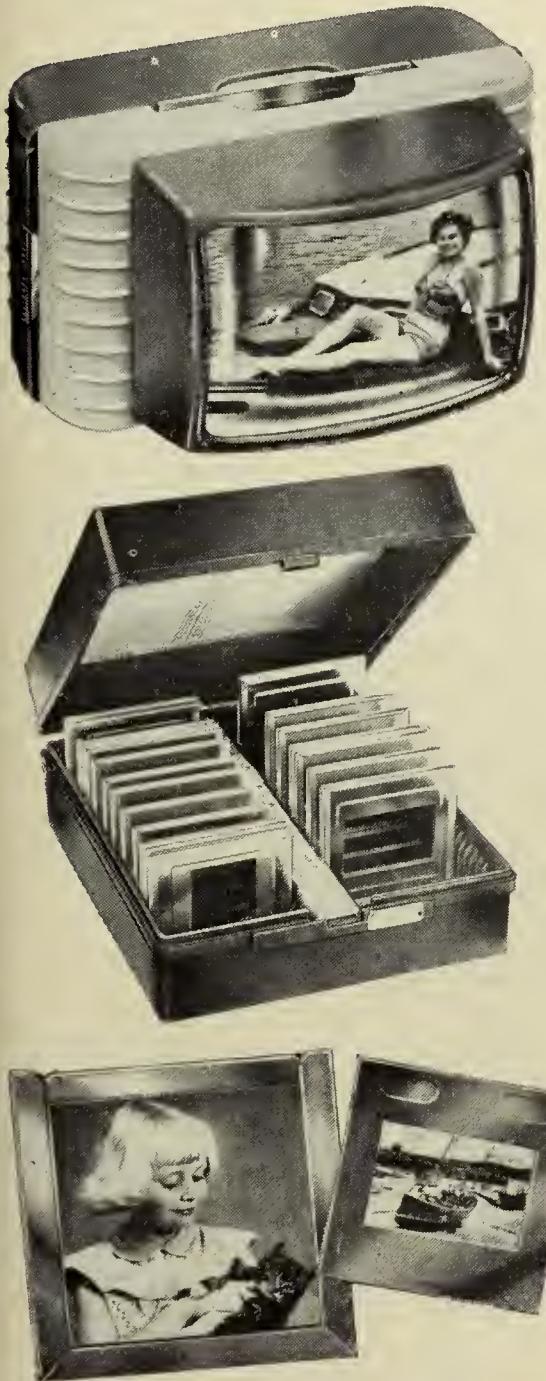
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It takes the minimum of selling to convince a colour enthusiast that he needs this box to collate and protect his irreplaceable transparencies. Strongly moulded in maroon coloured polythene, it has numbered slots for 60 mounted slides and an index card in the lid. The slots are tapered for easy insertion and removal of slides. This attractive box will withstand the roughest treatment. Even if dropped it will still afford the maximum protection to the contents. Packed for display in a brightly printed 3-colour carton. Retails at 9/6d.

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A line you can sell with the utmost confidence. They are easy to load, never warp or twist under the heat of the projector. The satin finish of the frames reflects the heat of the lamp, keeping the slides cool. Each slide is provided with two cover glasses. Packed ready for display in attractive cartons. Retail prices. COLORSLIDE 35, 2 × 2 ins. for 35 mm. transparencies per box of 20 ... 10/6d.

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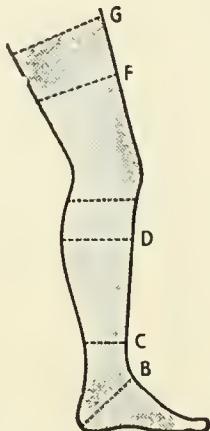
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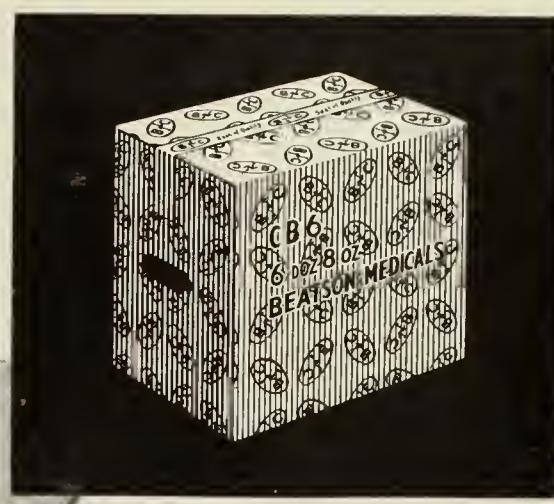
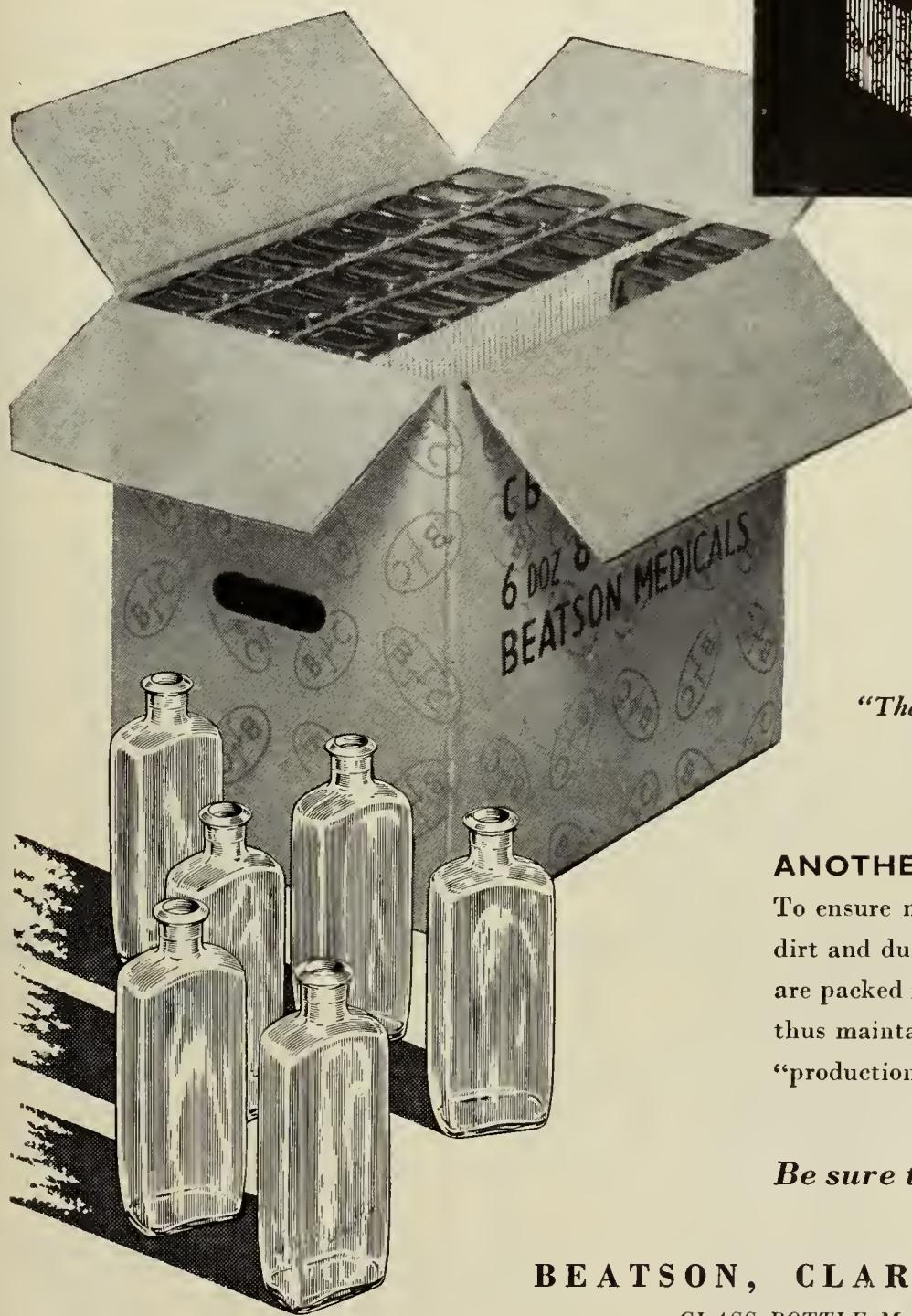
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Show her these wonderful, luxury hot water bottles—

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Covered in quilted satin. Pastel colours: Beige, Pink, Blue, Gold, Green, Lavender. Each wrapped in cellophane envelope. 36 per carton, 6 of each colour.

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Covered in rich velour. Colours: Blue, Beige, Lavender, Coral, Green, Gold. Each wrapped in cellophane envelope. Fully guaranteed. 36 per carton, 6 of each colour.

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The lightweight, unbreakable polythene Winchester—supplied free of charge—is a most useful container for the dispensary when empty.

MAW'S TANCOLIN is specifically formulated for children. It is an effective and palatable linctus indicated particularly in cases where the child normally dislikes or refuses medicine. The need for fractional doses arising from the employment of comparable adult preparations is avoided. While it is freely prescribable on E.C.10 (Cat. 3/4) the distinctive tangerine colour of Tancolin is an identification factor that is building up a brisk counter trade from past prescription and recommendation.

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6 oz. 32/9 doz. (plus 30% P.T.) retailing at 4/11 each	3 oz. 18/4 doz. (plus 30% P.T.) retailing at 2/9 each
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**2-litre
Dispensing
Pack 32/6
(tax free)
POLYTHENE
CONTAINER
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*the Tangerine-flavoured
Children's Cough Linctus*

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The Easthampstead Rural District Council are erecting SIX SHOPS, with flats above, on this Estate in the Burleigh neighbourhood district of Ascot, with an anticipated population of 3,200 (4,100, 1973) to be completed in November 1959.

Enquiries are invited from interested TRADESMEN

for tenancy on full repairing lease for 14 years with option renewal for a similar period at an agreed rate. Flat above shop is available to the lessee or his manager only on a separate repairing tenancy, at an estimated rental of 32/6 per week. The Council do not bind themselves to accept the highest or any tender. Fullest details of the Tenancies and application forms may be obtained from and personal enquiries should be made to:

Engineer & Surveyor,
The Easthampstead Rural District Council,
 The Council Offices,
 Bracknell, Berks
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 Completed forms to be returned
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 C 8497

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PROSPEROUS HERBAL BUSINESS: Owner 80 years, desires easier life, requires manager-partner for full responsibility. Eventual takeover, £500 approx. capital, balance by deferred payments, or sell. Separate optical department, with optician, optional after 3 months. Rare opportunity for young chemist or heralist. Box C 1790.

APPOINTMENTS **GENERAL HOSPITAL,** **MARGATE**

Locum Pharmacist

required. Applications, stating age, qualifications and experience, with names of two referees, to the Hospital Secretary. C 414

BARNET GENERAL HOSPITAL, **WELLHOUSE LANE,** **BARNET, HERTS**

(461 Beds)

Assistant-in-Dispensing

required. Whitley salary scale, with London Weighting; new well-equipped department. Hospital convenient to Northern Line (High Barnet) Station. Apply to Hospital Secretary, with details of experience and qualifications, and names of two referees. C 429

BEXLEY HOSPITAL **MANAGEMENT COMMITTEE,** **BEXLEY HOSPITAL** **(FOR NERVOUS AND MENTAL** **DISORDERS),**

DARTFORD HEATH, **BEXLEY, KENT**

Chief Pharmacist

required. Category III post. Accommodation available for single applicant. Salary scale £815 to £1,100 p.a. Locum Tenens would be considered for reasonable period. Applications, giving names of two referees, should be sent to the Group Secretary at the Hospital within 21 days. C 8484

BOSTON COMBINED HOSPITALS, **LINCOLNSHIRE**

(319 Beds)

Senior Pharmacist

required for modern well-equipped department. Pharmaceutical Whitley Council conditions of service and salary (£650 x £30 (6)—£830 per annum). Apply stating age, qualifications, experience and two names for reference to the Hospital Secretary, Boston General Hospital, Boston, Lines, by October 25, 1958. C 8495

BROOKWOOD HOSPITAL, **KNAPHILL, WOKING**

Assistant-in-Dispensing

Applications are invited for the above post. The successful candidate will be required to work under the supervision of the Chief Pharmacist, who is responsible for the preparation and issue of drugs and dressings for about 1,750 patients.

Salary scale £170 p.a. at age 16 years rising to £375 at age 22 years or over rising to a maximum of £490 p.a. (plus £20 p.a. for an approved qualification).

Professional and Technical Council B of Whitley Council conditions apply to the appointment which is subject to the provision of the National Health Service Superannuation Regulations.

The successful candidate will be required to pass a medical examination.

Accommodation available for female candidate for which a charge of £2 8s. per week will be made.

Applications giving particulars of age, experience and qualifications, together with names of two referees to the Physician Superintendent, as soon as possible. C 417

184 STRAND, W.C.2 Tel: TEMPLE BAR 9212/3 & 6340

CANTERBURY GROUP **HOSPITAL MANAGEMENT** **COMMITTEE**

Deputy Chief Pharmacist

Applications are invited for the above appointment to the Group Pharmaceutical Department (Category IV Hospitals). The department, which is situated at the Kent and Canterbury Hospital, serves the eleven hospitals and clinics in the area. Salary £675 rising by annual increments to a maximum of £910 per annum. Applications with full details and names of two referees to be sent as soon as possible to the Group Secretary, Central Office, Nunney Fields Hospital, Canterbury. C 8496

CENTRAL GROUP HOSPITAL **MANAGEMENT COMMITTEE**

Senior Pharmacist and Pharmacist

required at Bethnal Green Hospital (350 Acute beds). The department has recently been modernised and is approved for training students. N.H.S. Scale within the range £680-£870 for Senior Pharmacist and £600-£815 for Pharmacist, plus appropriate higher qualification allowance. Apply with details of age, training and experience to the Group Secretary, 213 Kingsland Road, London, E.2. C 8446

CITY GENERAL HOSPITAL, **SHEFFIELD, 5**

Senior Pharmacist, M.P.S.

Applications are invited for the above post. Salary scale £650 x £30 (6)—£830 per annum. (Additional £25 p.a. if holding higher qualifications.)

Apply giving full details of age, qualifications, experience, etc., and the names of two persons for reference to the Group Secretary, Sheffield No. 1 Hospital Management Committee, Nether Edge Hospital, Sheffield, 11. C 8485

KING EDWARD VII HOSPITAL, **WINDSOR**

(Category III Hospital)

Pharmacist

required immediately. Whitley salary. Applications with details of service and names of three referees to Secretary. C 8486

LAMBETH HOSPITAL, **BROOK DRIVE, S.E.11**

Assistant-in-Dispensing

required. Whitley Council rates of pay and conditions. Applications in writing, giving names of two referees to the Secretary. C 390

NOTTINGHAM No. 1 HOSPITAL **MANAGEMENT COMMITTEE,** **NOTTINGHAM EYE HOSPITAL**

Chief Pharmacist (Category II)

Applications are invited for the appointment of Chief Pharmacist (non-resident) at the above Hospital.

Salary and conditions of service in accordance with Whitley Council Regulations.

Applications giving full particulars together with the names of three referees to be sent as soon as possible to the Group Secretary, General Hospital, Nottingham. C 408

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Professional Valuers to the Pharmaceutical Trade.—Wholesale, Retail and Hospital Stocks. Branches throughout England and Scotland.

Appointments—Continued**METROPOLITAN HOSPITAL,
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LONDON, E.8**

Senior Pharmacist

Modern department. Permanent post vacant due to retirement. Salary £680 to £870 p.a. plus appropriate higher qualification allowance. Apply with details of age, training and experience to the Hospital Secretary.

C 398

**NORTH STAFFORDSHIRE
ROYAL INFIRMARY**

Deputy Chief Pharmacist

A vacancy exists for the above. Salary within scale £675 to £910 p.a.

Applications with names of two referees to the Hospital Secretary, Royal Infirmary, Stoke-on-Trent, as soon as possible.

**NOTTINGHAM No. 1 HOSPITAL
MANAGEMENT COMMITTEE,
STERILE PRODUCTS UNIT,
GENERAL HOSPITAL,
NOTTINGHAM**

Senior Pharmacist

Applications are invited for the appointment of Senior Pharmacist to take charge of, and develop, the new Sterile Products Unit, to be completed during the next six months, at the General Hospital, Nottingham. Detailed information may be obtained from the Chief Pharmacist.

Applications stating age, qualifications and experience, particularly in the preparation of sterile products, to be sent to the Group Secretary, General Hospital, Nottingham

C 426

**ST. FRANCIS HOSPITAL,
HAYWARDS HEATH,
SUSSEX**

Pharmacist

Applications are invited from Registered Pharmacists for the post of Pharmacist (non-resident).

Salary and conditions of service will be in accordance with the recommendations of the Pharmaceutical Whitley Council. The appointment is subject to passing a medical examination (except in the case of a transferred officer) and to the provisions of the National Health Service (Superannuation) Regulations, 1950. Applications in writing stating age, experience, together with the names of two referees to be forwarded to the Secretary to H.M.C., St. Francis Hospital, Haywards Heath, Sussex.

C 500

**ST. HELIER HOSPITAL,
CARSHALTOM, SURREY**

(Category V—733 beds)

Assistant-in-Dispensing

required for general dispensing duties in busy department. Experience of sterilising techniques an advantage. Canteen facilities available. London Weighting payable.

Applications, with names of two referees, to Secretary.

C 8503

**ST. OLAVE'S HOSPITAL,
LOWER ROAD,
ROTHERHITHE, S.E.16**

Senior Pharmacist

Applications are invited for the following appointment at the above hospital:

Salary £650-£830 p.a. plus London Weighting. Applications for this position, stating age, qualifications and experience, and giving the names of two referees, to the Hospital Secretary.

C 8460

**ST. HELIER HOSPITAL,
CARSHALTOM, SURREY**

(733 beds)

Senior Pharmacist

Applications invited for above post. General acute hospital (Category V): well-equipped pharmaceutical department. The successful applicant will be responsible for the manufacture and issue of ward stocks within hospital and also for issues to the other nine hospitals in Group.

Salary (plus London Weighting) in accordance with Whitley Council Scale. Good canteen facilities. Apply, giving names of two referees, to the Secretary.

C 8502

**ST. LEONARD'S HOSPITAL,
NUTTALL STREET,
LONDON, N.1**

Senior Pharmacist

Permanent post in modern department. Salary £650 to £830, plus appropriate London Weighting and higher qualification allowance. Apply with details of age, training and experience to Hospital Secretary.

C 400

**WAR MEMORIAL HOSPITAL,
WREXHAM, NORTH WALES
(230 Beds)**

Senior Pharmacist

Applications are invited for the appointment of Senior Pharmacist at the above hospital. Salary scale £650 x £30 (6) to £830 per annum. Additional £25 per annum if holding higher qualification.

Applications giving full details of experience and names of two referees to be sent to the Group Secretary, Maelor General Hospital, Wrexham.

C 8470

**WINWICK AND NEWCHURCH
HOSPITAL
MANAGEMENT COMMITTEE**

Senior Pharmacist

Applications are invited for the above post in the Group Pharmaceutical Department at Winwick Hospital (2,305 beds).

Salary £650 x £30 (6)—£830.

Applications giving date of birth, full particulars regarding qualifications, and experience together with names and addresses of two referees should be forwarded to the Secretary (Ref.: CD/107), Winwick Hospital, Warrington.

C 8483

SITUATIONS VACANT**RETAIL HOME**

BANSTEAD. Lady assistant required for counter and general duties, Skidmore, 30 High Street, Banstead, Surrey. Burgh Heath 720. (Evenings or Sundays, Burgh Heath 2024.)

C 1763

STAMFORD. Pharmacist required to manage modern shop in a very pleasant area. An attractive, spacious, self-contained flat is available at a reasonable rent. Present salary £975 per annum inclusive. This is a permanent, progressive post and is superannuated. Apply to Peterborough Co-operative Chemists, Ltd., Park Road, Peterborough.

C 1778

WHOLESALE**ALLIED LABORATORIES, LIMITED**

Medical Representative

Applications are invited for the following territories:

South-east London
Hampshire

Previous experience in representation work is desirable but consideration given to men with sound pharmaceutical and medical background. Applicants should hold current driving licence and reside on the territory applied for. Remuneration by salary, bonus and expenses. Life assurance and pension scheme in operation and car provided. Apply, in confidence, giving full details, to Sales Manager, Allied Laboratories, Ltd., 140 Park Lane, W.I.

C 421

ALERT representative (commission agency basis) required by manufacturers of well-established range of household products stocked by almost all chemists, most hardware shops and departmental stores, for southern half of Greater London. Must be well-connected with chemist and hardware trade both wholesale and retail. Many live accounts handed over. Substantial income through enthusiastic and thorough coverage. Car essential. Write Box C 1792.

**MEDICAL
REPRESENTATIVE**

required to call on hospitals and doctors in Cheshire, South Lancs and North Wales. Experience an advantage but not essential. Write in strict confidence giving full details. Box C 8504.

LEVMEDIC LIMITED**MEDICAL REPRESENTATIVE**

The English subsidiary of Farbenfabriken Bayer A.G., Leverkusen, Germany, require the services of an experienced Medical Representative in London.

Applications are invited from persons under 45 years who possess a pharmaceutical qualification or similar background and who are keen to establish a career in a growing organisation.

Experience of the N. and E. London Territory is desirable and a high standard of personal initiative and integrity is essential.

A good starting salary with a generous expense allowance is offered and a Company car is provided. A pension scheme will be established in the near future.

Fully detailed applications, including a recent photograph, should be addressed, in confidence, to:

The Sales Manager,
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37-41 Bedford Row,
London, W.C.1.

C 1784

GALA OF LONDON require a Sales Representative to cover West Sussex, Hampshire, Dorset and Berkshire. Applicants must have experience in calling on retail and wholesale chemists and also departmental stores. A good commencing salary and commission will be paid and a car provided. The Company operates a generous non-contributory pension and life assurance scheme. Write Box CD 453, L.P.E. Romano House, 399-401 Strand, London, W.C.2.

C 8491

MANUFACTURERS of surgical dressings require a number of first-class representatives in the retail division of the Company. This Company has achieved a considerable reputation in respect of the dressings at present being sold direct to the Industrial User and to Hospitals, Local Authorities, etc. It now intends to make these dressings available to the public. This is an excellent opportunity for a good man to join a go-ahead Company marketing products unequalled in this field. Connections with the chemist trade essential. Car owner required. Representatives will be required for the following areas:

Glasgow
Edinburgh
Newcastle
Manchester
Liverpool
Birmingham
Bristol
London
Southampton

Reply with full particulars which will be treated in strict confidence to:

"**Ultraplast,**"
Messrs. Wallace, Cameron & Co., Ltd.,
83 West Regent Street,
Glasgow, C.2

C 8441

PHARMACEUTICAL/COSMETIC manufacturers require qualified (chem. or pharm.) assistant chemist for quality control laboratory in Hampshire. Starting salary about £850; non-contributory pension scheme; modern working conditions. Apply with full details to Personnel Manager, Warner Hudnut, Eastleigh.

C 8488

PHARMACIST required to assist in the manufacture of pharmaceutical and toilet preparations in factory situated in North London. Previous experience not essential and vacancy offers excellent opportunities for keen and energetic applicant. Five-day week. Non-contributory pension scheme in operation. Apply giving details of age, qualifications, etc., to Box C 8508.

SCOTTISH company, manufacturing established pharmaceutical specialities, has vacancy for a representative to call on doctors and chemists in the West Riding of Yorkshire. Good salary, expenses, bonuses and pension scheme. Car provided, or allowance paid. Write giving age and experience to Box C 8501.

EUROPEAN FREE TRADE AREA

of Bayer Products Ltd.) provides interesting opportunities for pharmacists and others at senior and junior levels. If you are really fluent in another European language or have an acquaintance with several, write in confidence and tell us about your knowledge and experience. We may have an interesting and stimulating position for you in our headquarters at Kingston-on-Thames or one involving travelling or residence on the Continent. Apply Personnel Officer, Bayer Products Ltd., Neville House, Eden Street, Kingston-on-Thames, Surrey.

C 8493

Major expansion in Europe by Winthrop Products Ltd. (the associated Export Company

TABLET MANUFACTURER

Australian Pharmaceutical Company (Sigma Company Limited, Melbourne) requires working foreman for Tablet Department.

Applicant must be well experienced and have sound knowledge of all processes. Chemist, or other technically qualified person preferred. Salary £1,350 upwards, according to qualifications. Transport and housing assistance if needed.

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Situations Vacant—Continued

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The products to be detailed to the medical profession are the pharmaceutical specialties of C. H. Boehringer Sohn, which are marketed in the United Kingdom by Pfizer Ltd.

Applicants should be pharmacists or men with a broad pharmaceutical background. Previous experience of representation whilst advantageous is not essential, since training will be given to all successful applicants.

Applications stating full details of age, career to date and territory preference should be sent in confidence to:

Personnel Officer,
Pfizer, Ltd.,
137/139 Sandgate Road,
Folkestone, Kent,
quoting M.N.G. 6713.

C 8455

PARKE, DAVIS & COMPANY, LIMITED

Applications are invited from pharmacists up to 35 years of age who are interested in making a career as a medical representative in the Southern Home Counties.

Previous experience is unnecessary as thorough training will be given, but applicants should have a good pharmaceutical background and a keen interest in ethical pharmacy.

Initial salary will be based on age and experience, subsequent adjustment will recognise initiative and ability. Company car provided. A generous pension and life assurance plan is in operation.

Please write in the first instance giving details of age, education, qualifications and experience, to the Home Sales Manager, Parke, Davis & Co., Ltd., Staines Road, Hounslow, Middlesex.

C 8487

PFIZER LTD.

Medical Representatives

We invite applications from pharmacists or persons with a pharmaceutical or medical background who are interested in a successful and progressive career with this Company to fill the following vacancies:

Sheffield and District
N.E. England
Stirling and Perth area
North Kent
Berks and Wilts

Comprehensive training is given to successful applicants. A generous starting salary is offered, in addition a bonus scheme is in operation. A car is provided, expenses paid and a non-contributory Pension and Life Assurance Scheme operated.

Full detailed applications, indicating the area(s) interested in, should be made to:

Personnel Officer,
Pfizer Ltd.,
137/139 Sandgate Road, Folkestone,
quoting reference F. 6711.

C 8449

PROCESS WORKER required for manufacturing chemists N.W. Middlesex, aged 20-35. Apply with usual details to Box C 8463.

THE DIRECTORS of the Co-operative Wholesale Society, Ltd., require the services of a Young Pharmacist or Science Graduate interested in Pharmacy, for their drug works, Droylsden, Manchester. The post offers opportunity for gaining valuable experience in commercial and technical fields, and for the right man, prospects of promotion to executive position. There is a pension scheme in operation. Applications giving details of age, education, qualifications and experience, should be addressed to the Co-operative Wholesale Society, Ltd., Central Labour Department, 1 Balloon Street, Manchester, 4, endorsed "Chemist—Droylsden Drug Works," to be received not later than October 20, 1958.

C 8473

PRODUCTION MANAGER required by London manufacturing chemists of medium size, handling a wide variety of products. Applicants should have practical experience of long and short production runs of pharmaceutical and allied products; a knowledge of stock control together with an ability to control staff and work harmoniously with executives. Good salary according to ability and experience and excellent working conditions. Box C 1783.

REPRESENTATIVE required by well-known manufacturers of nationally advertised hair beauty products to call on chemists and stores in the Midlands. Salary, commission and expenses paid and car provided. Applicants should live in or near Birmingham and should have experience in calling upon and selling to chemists in the area. Write in confidence stating age, experience and present earnings to Dept. C.D., Golden, Ltd., L'Oreal Products, 7 Grosvenor Street, London, W.1. C 8482

VETERINARY REPRESENTATIVE

Required by Manufacturing and Wholesale Chemists to call on the qualified Veterinary Profession only in our Northern and Southern Territory. This is a well-established territory with good prospects of further development. Car and expenses provided with good salary and commission. Previous experience of representation is essential. Apply to Box C 8457.

WHOLESALE (OVERSEAS)

SOAP CHEMIST required work Kenya Colony, Asian-owned soap factory. Send full particulars, certificates, and personal history to: The Advertiser, P.O. Box 227, Kisumu, Kenya Colony. C 1785

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Progressive salary and pension scheme.

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DERBYSHIRE · DURHAM & NORTH YORKSHIRE (part)
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GLASGOW (part) & MID-SCOTLAND · S.W. WALES

Apply in writing with full particulars of age, education, qualifications and experience to:

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C 8494

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LADY DISPENSER, Hall certificate, experienced, early fifties, requires post with doctor or chemist, Southern area preferred. Box C 1782.

WHOLESALE

EXPERIENCED tablet coater, whites and colours, aged 45, seeks position in the London area. Box C 1788.

GENTLEMAN, with 30 years' comprehensive experience of the cosmetic and toilet trade, including sales, office, factory and general management, seeks good executive position with reliable firm. Box C 1789.

PHARMACIST, Irish (L.P.S.I.), 34, seeks position in manufacturing, laboratory or wholesale. Wide experience, good references. Box C 1771.

REPRESENTATIVE for leading ethical and manufacturing house seeks position in London/Home Counties area. Excellent pharmaceutical background, retail and manufacturing. Box C 1785.

YORKSHIRE. Any part or the whole. Elderly representative far too active to retire, desires to represent a pharmaceutical or cosmetic house. Well-known and respected in that county for over 30 years. Salary or commission basis. Own car and phone. Box C 1787.

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QUALIFIED IRISH CHEMIST (48) seeks appointment in Australia or Canada. Living accommodation if possible. Hospital pharmacy experience, wholesale and travelling. All replies answered. Box C 1747.

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MISCELLANEOUS SALES

ANTIQUE DRUG JARS for sale. Matching set of French Porcelain Jars with lids. Polychrome decoration and drug inscriptions. All very good condition. Also several others. F. S. Thomas, 11A North Road, Highgate Village, London, N.6. (Mountview 2527.) C 1791

ASPIRIN TABLETS, gr. 5, B.P. (25's). 50 gross, neatly and well packed in display cartons of 3 doz. 30/- per gross. Sample free. Sucro, 247 Archway Road, London, N.6. C 1769

FERROUS GLUCONATE: Approximately 30 cwt., slightly sub-B.P., standard, available ex stock Midlands. Apply Box C 8498.

WINCHESTER bottles for sale. About 1,000 second-hand. Offers? Standard Synthetics, Ltd., 76 Glenthorn Road, Barnes, London, S.W.13. C 8492

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View Day Prior and morning of sale. Catalogues (3d, by post) on application, Tel.: MON. 8501/2. C 8505

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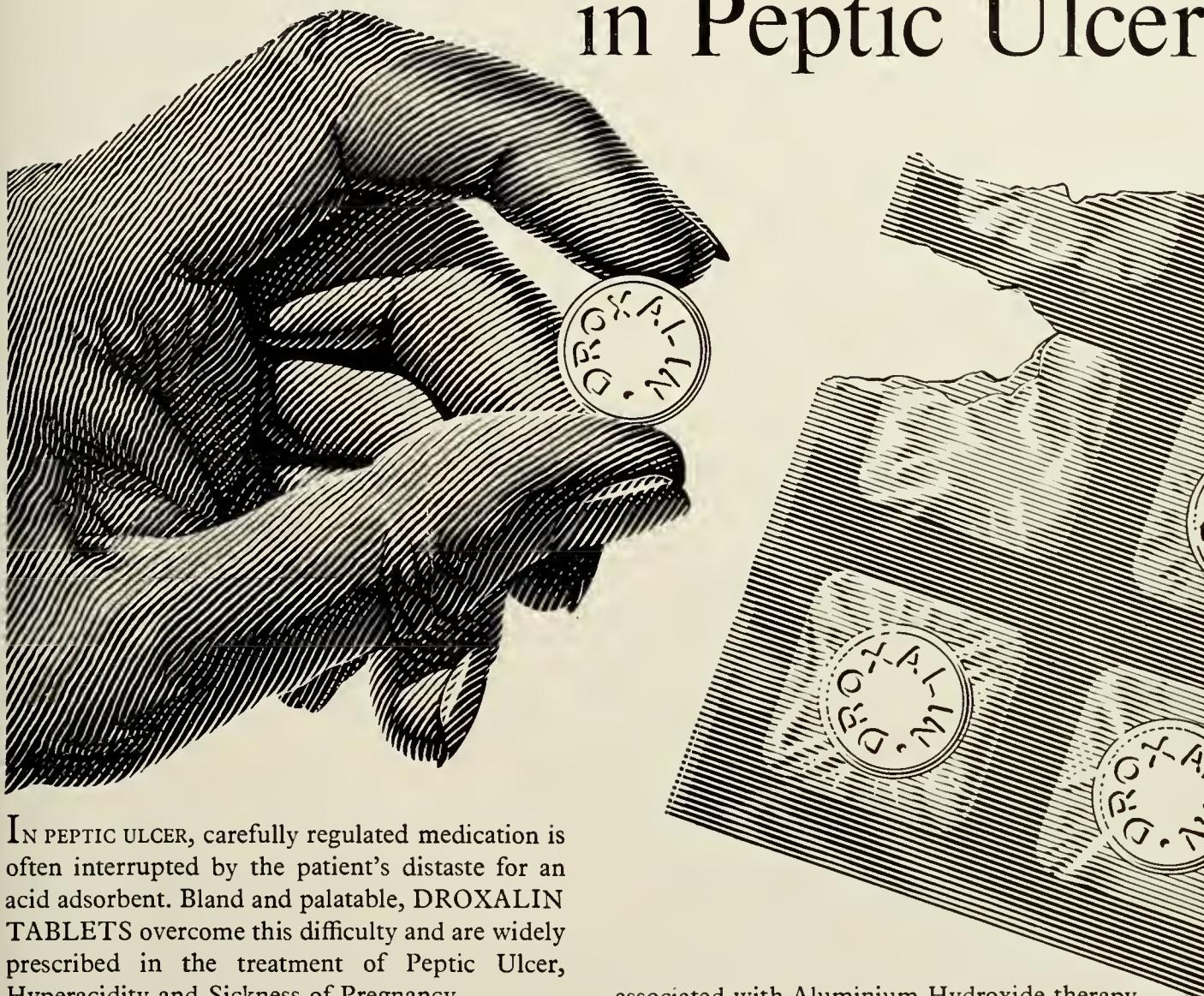
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